

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

For Release:

Jim Cast
Headquarters, Washington, D.C.
(Phone: 202/453-8356)

December 30, 1988
Embargoed until 2 p.m. EST

George H. Diller
Kennedy Space Center, Fla.
(Phone: 407/867-2468)

HONEYWELL AWARDED CONTRACT TO UPGRADE KSC CENTRAL DATA SYSTEM

NASA's John F. Kennedy Space Center, Fla., has awarded Honeywell Federal Systems, Inc., McLean, Va., a contract to upgrade the hardware and software of two existing computer systems in the Central Data System (CDS) in the Complex 39 Launch Control Center.

The initial fixed-price contract covers the period of Dec. 29, 1988 to Sept. 30, 1989, and is valued at \$7.2 million. There are four fixed-price options which could extend the contract to Sept. 30, 1993, for a possible total contract value of \$26.2 million.

The Central Data System stores Space Shuttle launch and test procedures, launch vehicle processing data, data analysis programs, historical data and contains the master program library.

- end -

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For Release:

Barbara Selby
Headquarters, Washington, D.C.
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December 28, 1988

George H. Diller
Kennedy Space Center, Fla.
(Phone: 407/867-2468)

EG&G BEGINS SEVENTH YEAR AS KSC SERVICES CONTRACTOR

NASA's John F. Kennedy Space Center, Fla., has awarded EG&G Florida, Inc., a government services division of EG&G, Inc., Wellesley, Mass., a 1-year extension of its existing contract for base operations services valued at approximately \$168 million.

The extension, effective Jan. 1 through Dec. 31, 1989, brings the cumulative value of the contract to \$879 million. This is the seventh 1-year extension to the base operations contract awarded EG&G in January 1983.

Under the cost-plus-award-fee extension, EG&G will continue to provide institutional and technical support services for utilities, grounds and facilities, administrative requirements, technical operations and health and protective services at the Kennedy Space Center.

- end -

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National Aeronautics and
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John F. Kennedy Space Center

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For Release:

Pat Phillips
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Dec. 30, 1988

KSC Release No. 101-88

Note to Editors/News Directors

CELSS HARVEST SCHEDULED FOR JAN. 4 AT KSC

Center Director Forrest S. McCartney will wield the pruning shears Jan. 4, 1989 as scientists reap the first harvest from a Controlled Ecological Life Support System (CELSS) experiment conducted in the Biomass Productive Chamber.

This phase of the CELSS project tested remote monitoring and control systems within the biomass chamber. Previously, plants were hand-tended by technicians to a limited degree.

As the CELSS experiment evolves, computerized and remote control devices will increasingly control the environment. Different scientific goals are set for each phase of the program.

Throughout this phase, the plants have been photographed, and technicians have performed a limited amount of "hands-on" evaluation to doublecheck the automated systems. As CELSS technology evolves, the sealed environmental studies will increasingly test the ability to grow plants in an artificially-maintained environment.

"We're doing good science, and we're very pleased with how well this phase has gone," said Dr. Bill Knott, Project Scientist. This portion of the CELSS project began in November, 1988.

The harvesting of wheat from the last few weeks of growth will take place on 1 p.m. on the fourth. News media wishing to attend should be at the KSC News Center by 12 noon for transportation to the CELSS site on Cape Canaveral Air Force Station.

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John F. Kennedy Space Center

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Karl Kristofferson
407-867-2468

For Release:
Dec. 4, 1988

KSC RELEASE NO. 100-88

KENNEDY PARKWAY NORTH OF GATE 4 TO BE RESURFACED

KENNEDY SPACE CENTER, Fla. -- NASA's John F. Kennedy Space Center has awarded a contract to W.W.G Asphalt Co., Inc., 5020 Nova Rd., Cocoa, Fla., to resurface Kennedy Parkway from Wilson Corner (Gate 4) north to Haulover Canal.

Under the firm fixed price contract for \$364,900, the company will provide labor, equipment and materials for the approximately seven-mile resurfacing job, which is to be completed within 90 days of start-up.

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For Release:

George H. Diller
Telephone 407/867-2468

Dec. 3, 1988

KSC Release No. 99-88

NOTICE TO EDITORS/NEWS DIRECTORS:

MAGELLAN BRIEFING AND SPACECRAFT SHOWING ON WEDNESDAY, DEC. 7

KENNEDY SPACE CENTER, Fla. -- The primary payload to be launched on the STS-30 Space Shuttle mission will be the topic of a briefing and photo opportunity on Wednesday, Dec. 7 at 12 noon.

Magellan, a spacecraft bound for Venus to radar map the surface of the planet, is in KSC's SAEF-2 planetary spacecraft checkout facility. The spacecraft will be almost fully assembled for the showing. Launch is scheduled for April 28, 1989.

A briefing will precede the showing at the KSC News Center. Participating will be:

Dr. Stephen Saunders, Magellan Project Scientist, Jet Propulsion Laboratory

Gary Parker, Magellan Spacecraft Manager, Jet Propulsion Laboratory

Charlie Brown, Director, Magellan Project, Martin Marietta Astronautics Group

After the briefing, media representatives will be provided transportation and escort to the spacecraft cleanroom. Because of Magellan's susceptibility to certain contaminants, those attending the showing are asked to refrain from using hairspray or makeup on the day of the event. Also, long pants and low-heeled, close-toed shoes will be required to gain access to the clean room area. White room attire will be provided.

No flame-producing devices can be allowed in any part of the SAEF-2 planetary spacecraft checkout facility. All camera equipment should be self contained and have internal power. No external power is available.

STS-27 mission badges will be honored for this event. Those without accreditation should contact the KSC News Center at 407/867-2468 to make badging arrangements before the close of business Tuesday, Dec. 6. Because access to the spacecraft is on a non-interference basis with testing, media representatives may wish to keep in touch with the News Center to be certain that there has been no change in the date or time of the event.

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For Release:

Dec. 15, 1988

KSC Release No. 99-88

KSC CONTRACTS AND EMPLOYMENT BOOST FLORIDA'S ECONOMY

KENNEDY SPACE CENTER, Fla. -- NASA's John F. Kennedy Space Center contributed \$1.08 billion to Florida's economy through jobs and contracts in Fiscal Year 1988.

Of the \$1-billion-plus expenditures, \$923 million went to contractors operating on-site at KSC. Another \$62 million went to various Brevard County off-site businesses. Purchases and contracts within Florida, but outside Brevard, totalled \$6.8 million. Civil service salaries amounted to \$89 million.

Officials estimate that at least 70 percent of the on-site and Brevard County expenditures stayed within the local area in the form of payrolls and purchases. KSC-generated purchases and contracts also contributed \$78.9 million to businesses in other states.

Employment at KSC showed an uptrend, with approximately 16,500 workers employed at the close of the fiscal year on Sept. 30. Of that total, about 11,000 were employed by KSC on-site contractors. Federal employees numbered almost 2,400. Another 3,100 people were employed through construction and tenant jobs at KSC.

The major contractors at KSC include Lockheed Space Operations Co., the Shuttle Processing Contract; EG&G Florida, Inc., the Base Operations Contract, McDonnell-Douglas Space Systems, Inc., the Payload Ground Operations Contract; and Rockwell International Corp., which provides Shuttle orbiter logistics.

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NASA Facts

National Aeronautics and
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John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

KSC Release No. 87-88
December 1988

Shuttle landing, post-landing and SRB retrieval operations

Landing operations

When a mission's planned in-orbit operations have been accomplished, the emphasis on board the Space Shuttle turns to the task of preparing the vehicle for its return to Earth. Usually, the last full day in orbit is devoted primarily to stowing equipment, cleaning up the living areas and making final systems configurations which will facilitate post-landing processing.

The crew schedule, or timeline, has crew members awake and into their "workday" six to eight hours before landing. At about four hours before deorbit maneuvers are scheduled, the crew and flight controllers have finished with the Crew Activity Plan for that mission.

They then work from the mission's Deorbit Prep handbook, which covers the major deorbit events leading up to touchdown. Major events include the "go" from Mission Control Center to close the payload bay doors, and the final OK to perform the deorbit burn which will bring the orbiter back to Earth.

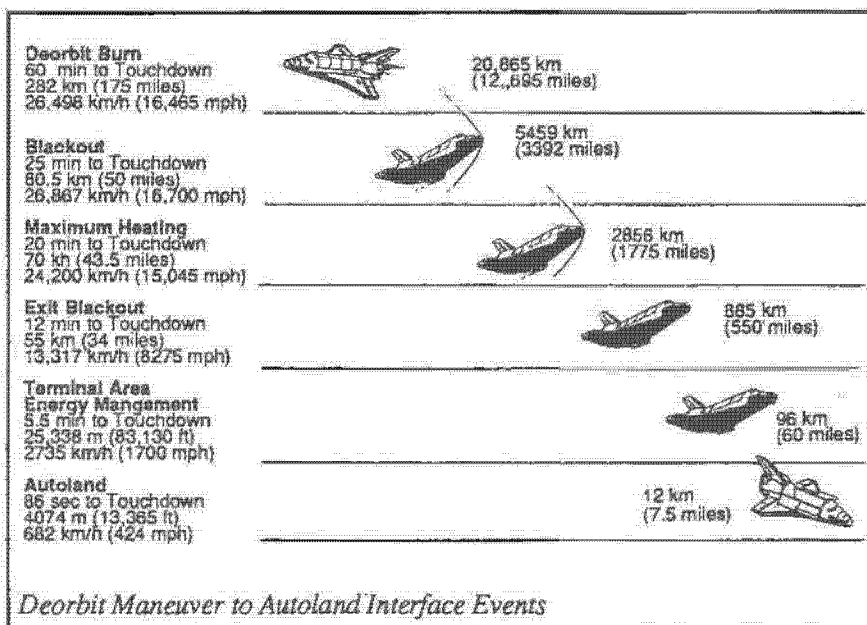
Before the deorbit burn is performed, the orbiter is turned to a tail-first attitude in which the aft end of the orbiter faces the direction of travel. At a predesignated time, the Orbital Maneuvering System (OMS) engines are fired to slow the orbiter down and permit deorbit.

The Reaction Control System (RCS) thrusters are then used to

turn the orbiter back into a nose-first attitude. These thrusters are used during much of the re-entry pitch, roll and yaw maneuvering, until the orbiter's aerodynamic, aircraft-like control surfaces encounter enough atmospheric drag to control the landing.

This is called Entry Interface (EI) and usually occurs 30 minutes before touchdown at about 400,000 feet. At this time, a communications blackout occurs as the orbiter is enveloped in a sheath of plasma caused by electromagnetic forces generated from the high heat experienced during entry into the atmosphere.

As the orbiter glides toward a landing—initially at a velocity of 25,000 feet per second at the EI point—its



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Sept. 29, 1988

George Diller
Area Code 407/867-2468

KSC Release No. 96 - 88

SPACE SHUTTLE WEATHER LAUNCH COMMIT CRITERIA

The return to flight of the Space Shuttle has been accompanied by significant changes in the meteorological guidelines associated with committing to a liftoff.

The launch weather guidelines involving the Space Shuttle and expendable rockets have converged in many areas, while also preserving some distinction for the characteristics of each launch vehicle. The criteria are broadly conservative, thus assuring avoidance of conditions possibly adverse to the vehicle. Also, additions to staff have been made both in the weather forecasting and weather research areas.

For the launch of the Space Shuttle Atlantis on STS-27, the weather launch commit criteria are essentially the same as established for the STS-26 mission of the Space Shuttle Discovery. Weather "outlooks" are provided by the Cape Canaveral Forecast Facility begin at Launch minus 5 days. These include weather trends, and their possible effects on launch day.

A formal prelaunch weather briefing will be held on Launch minus 1 day which will be a specific weather briefing for all areas of Space Shuttle launch operations.

During the countdown, formal weather briefings will occur approximately as follows:

T-14 hr 0 min: Briefing for removal of Rotating Service Structure
T-9 hr 05 min: Briefing for propellant loading and the launch
T-4 hr 30 min: Briefing for astronaut ingress and the launch
T-3 hr 50 min: Astronaut weather briefing
T-0 hr 45 min: Briefing for the launch and RTLS
T-0 hr 09 min: Poll all weather constraints

The basic weather parameters on the pad at liftoff must be:

Temperature: Prior to external tank propellant loading, tanking will not begin if the 24 hour average temperature has been below 41 degrees. After tanking is complete, the countdown will not continue if the temperature exceeds 99 degrees; if the wind is 5 knots or greater, less than 37 degrees; or, if the wind is below 5 knots, 47 degrees.

Wind: No higher than 24 knots or, if the wind is within 30 compass degrees of South, not greater than 17 knots. The Space Shuttle will not be launched within 30 minutes of the time a determination has been made that the upper wind profile will adversely affect the performance of the launch vehicle.

The upper atmosphere wind profile must conform to either one of two wind loading programs developed by the Johnson Space Center. This profile is determined by a series of Jimsphere wind balloon releases from Cape Canaveral Air Force Station. A final recommendation is made by the JSC Loads Evaluation Team to the KSC launch director at Launch minus 30 minutes.

Precipitation: None at the launch pad or within the flight path.

Lightning (and electric fields with triggering potential):

- None detected within 10 nautical miles of the launch pad or below 100,000 feet within the vehicle's path of flight within 30 minutes prior to launch, unless the source of lightning has moved more than 10 nautical miles away from the launch pad or the flight path.

- The one-minute average of the electric field mill network, used to measure electric fields, shall not exceed -1 or +1 kilovolt per meter within five nautical miles of the launch pad at any time within 15 minutes prior to launch. This shall not apply if there are no clouds within 10 nautical miles of the launch pad, and if it can be determined that smoke or fog are causing abnormal readings.

Clouds: (types known to contain hazardous electric fields)

- The Space Shuttle may not be launched if the planned flight path is through a layer of clouds with a thickness of 4,500 feet or greater where the temperature of any part of the layer is between 32 degrees F. and -4 degrees F. This may correspond to the altitudes between approximately 13,000 feet and 23,000 feet.

- The Space Shuttle may not be launched if the planned flight path is through any cloud type that extends to an altitude where the temperature is between 32 degrees and -4 degrees F. if this is associated with disturbed weather within five nautical miles of the flight path. (Again, this may correspond to the region between approximately 13,000 feet and 23,000 feet altitude.)

-The Space Shuttle may not be launched through an opaque cloud which has become detached from a thunderstorm within three hours before launch, or within 5 nautical miles of thunderstorm debris clouds not able to be monitored by the field mill network, or producing a radar return showing light rain.

-The Space Shuttle may not be launched through or within 10 nautical miles of cumulus type clouds with tops extending higher than the -4 degree F. temperature level (approximately 23,000 feet), or of the nearest edge of any cumulonimbus or thunderstorm cloud including its associated anvil.

-The Space Shuttle may not be launched through cumulus type clouds with tops extending into a temperatures 41 degrees F. or colder (located at approximately 10,000 feet), or within 5 nautical miles of clouds with tops extending higher than the 14 degree F. temperature level (located at approximately 18,000 feet).

CONTINGENCY LANDING CRITERIA

Weather conditions for a landing also affect the launch criteria since the possibility exists for a Return To Launch Site Abort (RTLS) or for emergency landings at other off-site locations. The landing criteria for the KSC Shuttle Landing Facility, the Trans-Atlantic Abort Sites (TAL), and the Abort Once Around (AOA) sites of Edwards Air Force Base, and White Sands Space Harbor are:

- Cloud coverage less than 5 tenths below 8,000 feet with a clear line sight to the end of the runway.

- No detached opaque thunderstorm anvil cloud within 10 nautical miles of the runway or within 5 nautical miles of the approach path extending to 30 nautical miles distance.

- For RTLS and the TAL sites, no thunderstorms, lightning, or precipitation within 20 nautical miles of the runway, or within 10 nautical miles of the approach path extending to 30 nautical miles distance.

- Visibility for RTLS, 7 statute miles or greater
- Visibility for the TAL sites and AOA, 5 statute miles or greater where MLS instrument landing capability is available; otherwise 7 statute miles.
- Crosswind component not to exceed 12 knots
- Headwind not to exceed 25 knots
- Tailwind not to exceed 10 knots
- Sun Angle on final approach not within 10 degrees in azimuth and 0 to 20 degrees in elevation

RECOVERY AREAS

Solid Rocket Booster Recovery Site

- Visibility 1.5 nautical miles or greater
- Sea State not to exceed Code 5 (8-13 feet)

Guidelines in use for the Offshore Crew Recovery Area

- Wind not greater than 25 knots
- Seas not greater than 8 feet
- Visibility not less than 1/2 nautical mile
- Ceiling not less than 500 feet

The instrumentation considered highly desirable for the forecaster to develop the downrange and launch clearance forecast are:

- Radar
- Field Mill Network
- Weather Reconnaissance Aircraft
- Rawinsonde/Jimsphere balloon sounding data
- Satellite data and photographs
- Meteorological Data Display System (MIDDS)

A "Good Sense Rule" has been implemented:

"Even when constraints are not violated, if any other hazardous conditions exist, the launch weather officer will report the threat to the launch director. The launch director may hold at any time based on the instability of the weather."

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Patricia Phillips
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For Release:
Nov. 28, 1988

KSC Release No. 95-88

KSC AREA BOATING RESTRICTED FOR STS-27 LAUNCH

KENNEDY SPACE CENTER, Fla. -- Waterways and boating around the Kennedy Space Center will be strictly controlled for the launch of the Space Shuttle Atlantis on the STS-27 mission.

Some safety and security requirements, which include new U.S. Air Force Range Safety impact limit lines, will go into effect as early as Monday, Nov. 28. Other requirements will go into effect at sundown, Wednesday, Nov. 30, the night before the STS-27 launch. The launch window opens at 6:32 a.m. Thursday, Dec. 1.

The U.S. Coast Guard, the U.S. Fish and Wildlife Service, and KSC security forces will share responsibility for enforcing the boating guidelines. A general description of the restricted areas follows.

Banana River: security limits begin at the Banana River Barge Canal (State Road 528) on the south and extend north. These restrictions will go into effect at sundown, Nov. 30.

Atlantic Ocean: a phased security/safety approach will be used. Beginning at sundown the night before launch, a general exclusion zone will be in effect three miles offshore from Haulover Canal on the north to the entrance of Port Canaveral on the south. On launch day, ocean-going traffic will also be restricted on a path five miles either side of a line 30 miles due east from Pad B (latitude 28 degrees, 37 minutes, 37.26 seconds north; longitude 80 degrees, 37 minutes, 15.09 seconds west). The "flight path" exclusion will be in addition to the general three-mile exclusion zone.

Mosquito Lagoon: will be off limits from Haulover Canal south to all boats beginning at dusk, Monday, Nov. 28.

Indian River: restrictions apply east of the main channel, from the NASA Causeway north to the Haulover Canal, beginning at sundown the night before launch.

Boating restrictions will be lifted approximately one hour after launch.

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For Release:
Nov. 28, 1988

KSC Release No. 94-88

KSC AREA BRIDGE OPENINGS TO BE CONTROLLED FOR STS-27 LAUNCH

KENNEDY SPACE CENTER, Fla. -- The opening and closing of bridges over waterways surrounding the Kennedy Space Center will be strictly controlled during the hours immediately before and after the launch of the Space Shuttle Atlantis on the STS-27 mission.

Bridges affected by launch requirements include:

- Canaveral Harbor Barge Canal (State Road 401, South of Cape Canaveral Air Force Station Gate 1);
- Indian River Causeway, Intercoastal Waterway at Addison Point (NASA Causeway, west);
- Merritt Island Barge Canal, Merritt Island, State Road 3 (A1A);
- Haulover Canal Bridge, State Road 3 (north end of KSC).

Restraints on bridge openings for boat traffic will begin three hours before launch (L-3). The bridges may be opened for 5 minutes at the following points in the launch countdown: L-180 minutes, L-150 minutes, L-120 minutes, L-90 minutes, and L-65 minutes.

Bridges will remain closed to boat traffic from L-60 minutes to 90 minutes after liftoff (L+90). They may then open for 5 minutes at L+90 minutes, L+120 minutes, and L+150 minutes. Bridge operations will return to normal at an hour and a half (L+180 minutes) after launch.

Should Atlantis be required to land at KSC, all bridges would remain closed to boat traffic from 45 minutes before landing to one hour after landing.

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For Release:

Nov. 28, 1988

KSC Release No. 93-88

GENERAL AVIATION RESTRICTED FROM KSC AIRSPACE DURING STS-27 LAUNCH

KENNEDY SPACE CENTER, Fla. -- The airspace around KSC will be restricted to official aircraft and will be off-limits to general aviation pilots for the launch of STS-27, now scheduled for Thursday, Dec. 1.

NOTAMS must be checked by pilots prior to flights near the KSC area. Pilots are warned that violations of the restricted airspaces can result in serious penalties, including suspension or revocation of pilot privileges.

Official aircraft supporting the launch will be in the air. Pilots must be aware that wandering into a restricted area is not only forbidden, but will also create a safety hazard to support aircraft and the errant pilot.

Anyone wishing to view the launch from the air should stay well west of the Indian River. Be advised that the airspace in that area is expected to be extremely congested with both controlled and uncontrolled aircraft.

Pilots should also be aware of the SRB exhaust cloud that occurs after launch, and they should stay at least five miles away from that cloud, even if it drifts out of the restricted area. Research aircraft will be flying into and out of the cloud, and visibility will be limited.

In general, the airspace restrictions cover a variety of air ranges from now through launch. In addition to the normal restrictions over KSC and Cape Canaveral Air Force Station, launch-specific restrictions beginning 3 hours before launch will require that all private aircraft stay out of an area roughly bounded by the west side of the Indian River on the west, the Trident Basin (State Road 528 area) on the south, slightly north of Haulover Canal. The off-shore restricted area extends east into the Atlantic 25 miles (as governed by FAR 91.102). These restrictions are "surface to unlimited."

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Pilots should consult the current edition of the Jacksonville Sectional Aeronautical Chart. In addition, they should contact the St. Petersburg Flight Service Station at 1-800-99-27433 (1-800-WX-BRIEF). Advisories will be available from the Patrick Approach Control (VHF 119.25 megahertz), Space Center Executive Airport Tower (TIX) (VHF 118.9 megahertz), or the NASA Tower (126.3 megahertz).

Pilots should also refer to the current Patrick Air Force Base release on restricted air spaces.

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For Release:

Sarah Keegan
Headquarters, Washington, D.C.
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November 16, 1988

Dick Young
Kennedy Space Center, Fla.
(Phone: 407/867-2468)

LAUNCH ADVISORY: NASA STS-27 MISSION SET FOR DECEMBER LAUNCH

Following completion of the 2-day STS-27 flight readiness review today at Kennedy Space Center, Fla., NASA officials set Dec. 1, 1988, as the launch date for the next Space Shuttle flight.

Rear Admiral Richard H. Truly, NASA associate administrator for space flight, said, "I've just finished hearing comprehensive assessments of flight readiness from both government and contractor representatives of all Shuttle elements and systems. I am pleased to report that the Space Shuttle Atlantis is as ready to fly as Discovery was at this same point before the STS-26 mission last September."

STS-27 crew members are Robert L. Gibson (Cdr., USN), commander; Guy S. Gardner (Lt. Col., USAF), pilot; and mission specialists Richard M. Mullane (Col., USAF), Jerry L. Ross (Lt. Col., USAF) and William M. Shepherd, (Cdr., USN).

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For Release:
November 10, 1988

Dick Young
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RELEASE: 88-156

SHUTTLE ORBITER LOGISTICS CONTRACT EXTENDED

An agreement, designed to enhance the efficiency of Space Shuttle logistics operations by consolidating them at the Florida launch site, has been negotiated with Rockwell International Corporation's Space Transportation Systems Division.

NASA's John F. Kennedy Space Center has awarded a cost-plus-fixed-fee/award fee contract extension for \$419,187,597 to the Rockwell division. The contract covers the 3-year period beginning Oct. 1, 1988. The award does not represent any new work but is an extension and consolidation of existing functions managed by the Kennedy Space Center.

The present plan will consolidate Rockwell's Space Shuttle orbiter logistics operation now on the west coast with its Launch Support Operations facilities at the Kennedy Space Center and Cape Canaveral, Fla.

Under the contract, Rockwell's orbiter logistics operations in Downey, Calif., will be transferred to its existing Launch Support Operations activity at KSC. During this same period, Rockwell's component overhaul and repair activities will be moved from its network of original Shuttle equipment manufacturers across the nation to the Rockwell Services Center at Cape Canaveral, Fla. The move will complete a consolidation begun in 1985.

The co-location of these activities will increase the efficiency and responsiveness of the company's Shuttle flight support operations, according to NASA and Rockwell officials.

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Rockwell's orbiter logistics operation covers all functions associated with the purchase of orbiter ground support equipment (GSE) spares and the repair of existing orbiter and GSE hardware assigned to the Shuttle program. The consolidation will transfer in total all program management, logistics, material, quality assurance and business management functions to the company's KSC area facilities.

The consolidation is expected to create 400 to 450 new jobs in Florida. About 100 to 125 experienced personnel will be transferred from Downey or other Rockwell divisions to the Florida operation. The company's orbiter logistics support complement in Florida presently numbers approximately 200.

The Rockwell Services Center in Cape Canaveral will assume full responsibility for orbiter component overhaul and repair, as well as provide engineering support for repair activities. Certain engineering design support and manufacturing tasks will continue to be performed at the company's Downey, Calif., facilities.

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For Release:

Lisa Malone
Kennedy Space Center, Fla.
(407/ 867-2468)

November 10, 1988

News Release No. - 90-88

STS-27 COUNTDOWN DEMONSTRATION TEST PLANNED FOR NOVEMBER 14

KENNEDY SPACE CENTER, Fla. -- Space Shuttle workers are busy planning for the STS-27 Terminal Countdown Demonstration Test (TCDT) set for Monday, Nov. 14. This test serves as a dress rehearsal for the flight crew and the KSC launch team.

The simulated countdown will begin at 7:40 a.m. Sunday, Nov. 13 when the test team members report to their computer consoles in Firing Room 3 in the Launch Control Center. Many of the countdown events will be simulated and abbreviated for this test which culminates with a T zero at 11 a.m. EST Monday, Nov. 14.

Members of the STS-27 flight crew will arrive on Saturday, Nov. 12 at KSC's Shuttle Landing Facility to participate in this standard pre-launch test. Mission STS-27 will be commanded by Robert "Hoot" Gibson, and Guy Gardner is the pilot. The three mission specialists are Richard "Mike" Mullane, Jerry Ross and William Shepard.

While here, the flight crew will receive the usual training in emergency escape procedures from the launch pad and will be briefed on the status of the vehicle elements (the shuttle, external tank and solid rocket boosters).

Events on the day of the test will mimic those of launch day. The five-member flight crew will be awakened, eat breakfast, don their new partial pressure launch and entry suits, and depart for the pad. Astronaut support personnel and members of the closeout crew will assist the astronauts in getting aboard the shuttle Atlantis. The crew will perform voice checks and flip switches in the shuttle's cockpit to practice for launch day.

After the test, the flight crew will return to Houston to make final preparations for the mission. Here at KSC, final launch preparations will be performed on the vehicle elements at Launch Pad 39-B.

NASA plans to launch the shuttle Atlantis later this month on a dedicated Department of Defense mission. Atlantis is scheduled to land on the dry lake bed at Edwards Air Force Base, Calif., at the conclusion of the mission.

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For Release:
Nov. 8, 1988

KSC Release No. 88-88

Note to Editors/News Directors

CELSS CEREMONY SCHEDULED FOR NOV. 10 AT KSC

KENNEDY SPACE CENTER, Fla. -- A brief ceremony marking the next major step in Controlled Ecological Life Support Systems (CELSS) research will be held 3 p.m. Thursday, Nov. 10 at Hangar L on Cape Canaveral Air Force Station.

At the conclusion of the ceremony, the Biomass Production Chamber will be officially sealed for the next research phase. Once the chamber is sealed, remote monitoring and automated devices will be used to control the chamber environment.

"This is the largest single research project at KSC, and the closing of the hatch for the sealed environment studies is a major event," said Dr. Paul Buchanan, director of the KSC Biomedical Operations and Research Office.

Eventually, the CELSS work at KSC will lead to knowledge and proven techniques to support astronauts on long-duration flights and in planetary habitats. The goals are to learn how to use a controlled environment to grow food, "scrub the air" by generating oxygen, and recycle waste products to fertilize the plants.

Those interested in covering this event should be at the KSC Press Site no later than 2:15 p.m. for transportation to the event. Photographers should wear pants and tennis shoes or other safe foot gear, since photography opportunities for the hatch closing will involve climbing a ladder.

For more information, contact the News Center at 867-2468.

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

Patti Phelps
Tel. (407) 867-4444
KSC Release No. 87-88-1

For Release:
IMMEDIATE

NASA HONORS KENNEDY SPACE CENTER EMPLOYEES

KENNEDY SPACE CENTER, FL - Kennedy Space Center is honoring 59 of its civil service and contractor employees at a special Honoree Event, to be held November 15-17, at the Kennedy Space Center.

The KSC employees are among some 260 NASA and industry employees from around the country who will be honored by top NASA and industry leaders for their significant contributions to the nation's space program.

The Honorees will attend a special reception in their honor, and will be joined by astronauts and senior NASA and industry officials of the National Space Transportation System team. They will also tour Kennedy Space Center, visit Space Camp, and participate in various briefings and seminars.

The Honoree Award is the highest form of recognition bestowed upon an employee by the NASA Manned Space Flight Awareness Program. "These individuals are selected for their professional dedication and outstanding achievement in support of the manned space flight program" said Raymond R. Corey, Chief of the Education and Awareness Branch of KSC Public Affairs.

Thirteen civil service employees will be honored. They are Lois J. Cox, Polly Gardiner, Josh Travis, Phil Hooper, Ralph Beeson, Dennis Matthews, Mary J. Brewer, Barbara M. Duffy, Pamela J. Bookman, Martha P. Teague, Richard L. Hartung, Sarah B. Archibald, and Maj. Victor Segall (U.S. Air Force).

Contractor employees to be honored are: Arthur L. Taylor, Boeing Aerospace Operations; E. Ann Kreuzinger and J. Lamar Davis, Computer Sciences Corporation; Duane C. MacEntee, George L. McConn, Stephen P. McGovern, Robert J. Ullius, W. H. McDaniel, T. Louise Gerlach, EG&G Florida, Inc.; David R. Reed, Honeywell Federal Systems; H. W. "Wes" Woodside, Jr, IBM Corporation; Joseph Thomas and Ronald H. Feldhauser, BAMS1, Inc.; Roy C. Burton, Grumman Technical Services; and Ronald H. Jones, Rocketdyne.

Also, Mary J. Baxter, Patricia N. Daniels, Rodney D. Davis, Ronald M. Fussell, David A. Gardner and Warren Wenner II, McDonnell Douglas Astronautics Company; Stephen E. Holmes and Karen E. Mosrie, Rockwell International Corp.; Gordon L. Morton, Wiltech Corp.; Jay Bonadio, Joan Bray, Kathy Carleton, Tim Hales and Roland LeBon, USBI; Gary Hill, Eagle-Picher Industries; Clark H. Hurd, Morton Thiokol, Inc.; and Thomas F. Landers, Martin Marrieta Manned Space Systems.

From Lockheed Space Operations Company are Kellee Ash, Charles N. Bass, Michael Ettleman, Rick Flanagan, Mark D. Gaedcke, Ralph E. Gregory, John M. Janokaitis, Jackie B. Johnson, Patricia A. Leslie, Robert A. Neal, Lee M. Potter, Pete Scobby, J. Allyn Smith and Henry "Tom" Studstill.

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KSC Release No. 87-88-2

For Release:
IMMEDIATE

RALPH A. BEESON HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Ralph A. Beeson, son of the late Mr. and Mrs. Edgar W. Beeson, and a 1953 graduate of Horatio High School in Horatio, AR, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Beeson, who was born in Horatio, AR, has a bachelor's degree from the University of Maryland and a master's in public administration from Webster College, St. Louis, MO. He served in the U.S. Air Force from 1953-1978, retiring as a captain.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Beeson, a NASA security specialist, serves as the security classification management authority for KSC. He and his wife, Joyce, live in Titusville.

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KSC Release No. 87-88-3

For Release:
IMMEDIATE

BARBARA M. DUFFY HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Barbara M. Duffy, daughter of Emily A. Yurawecz of Washington, D.C., and a 1958 graduate of St. Cecilia's Academy in Washington, D.C., is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Duffy, who was born in Washington, D.C., attended Brevard Community College in Cocoa, FL, and is now a business major at Rollins College in Winter Park, FL.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Duffy, a NASA employee, is secretary and personal assistant to the Director of Safety and Reliability at KSC. She was married to the late Raymond P. Duffy, and has six children. She lives in Cocoa Beach, FL.

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KSC Release No. 87-88-4

For Release:
IMMEDIATE

RICHARD L. HARTUNG HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Richard L. Hartung, son of Lloyd and Hazel Hartung of Ridgeland, WI, and a 1957 graduate of Prairie Farm High School, Prairie Farm, WI, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Hartung, who was born in Ridgeland, WI, has been a KSC employee since 1961. He served in the U.S. Army from 1957-1960.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Hartung is a NASA station manager in the operations section of the launch processing system. He and his wife, Joyce, have six children. They live in Titusville, FL.

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KSC Release No. 87-88-5

For Release:
IMMEDIATE

MARTIE TEAGUE HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Martie Teague, daughter of Mr. and Mrs. Mickey Wise of Titusville, FL, and a 1964 graduate of Kennard Dale High School, Fawn Grove, PA, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Teague, who was born in Havre de Grace, MD, is currently attending Brevard Community College in Florida.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Teague, a NASA employee, is secretary to the Chief of the Systems Engineering and Integration Office in the Space Station Directorate. She and her husband, Allen, have two children and live in Titusville, FL.

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KSC Release No. 87-88-6

For Release:
IMMEDIATE

JOSHUA C. TRAVIS HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Joshua C. Travis, son of Nettie Darden of Clarksville, FL, and Leon C. Hoff, Sr. of Greensboro, NC, and a 1963 graduate of William R. Boone High School in Orlando, FL, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Travis, who was born in Altha, FL, attended the University of Central Florida in Orlando, FL, and graduated with a degree in chemistry from the University of Florida, Gainesville, FL, in 1972. He also served in the U.S. Marine Corps.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Travis, a NASA electronics engineer, lives with his wife, Leonarda, in Titusville, FL.

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KSC Release No. 87-88-7

For Release:
IMMEDIATE

SARAH BIBLE ARCHIBALD HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Sarah Bible Archibald, daughter of Frances Bible Self of Waynesboro, NC, and a 1961 graduate of Robert E. Lee High School, Jacksonville, FL, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Archibald, who was born in Greenville, SC, has been employed at KSC since 1985. She formerly worked for the U.S. Army Corps of Engineers in Riyadh, Saudi Arabia, for 6 years.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Archibald, a computer operator with the General Services Administration, and her husband, John W. Archibald III, live in Titusville, FL. They have two children.

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For Release:
IMMEDIATE

E. ANN KREUZINGER HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - E. Ann Kreuzinger, daughter of Mr. and Mrs. S. W. Shiley Jr. of Ft. Lauderdale, FL, and a resident of Titusville, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Kreuzinger, who was born in Pryor, OK, graduated from Shades Valley High School, Birmingham AL. She received a bachelor's degree in mathematics from the University of Alabama, Tuscaloosa, AL, in 1966. She also has won the prestigious NASA Silver Snoopy and Apollo Roll of Honor awards.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Kreuzinger, a computer scientist with Computer Sciences Corp., is married to Thomas George Kreuzinger, who also works at KSC. She has two children.

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For Release:
IMMEDIATE

STEPHEN P. MCGOVERN HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Stephen P. McGovern, son of Luke F. and Priscilla M. McGovern of Kissimmee, FL, and a 1974 graduate of Catholic Memorial High School, West Roxbury, MA, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

McGovern, who was born in Boston, MA, graduated from the University of Central Florida in 1988 with a bachelor's degree in public administration.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

McGovern is responsible for planning and coordinating special security operations at KSC for EG&G Florida, Inc. He lives in Cocoa, FL, with his wife, Margaret, and two children.

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KSC Release No. 87-88-10

For Release:

IMMEDIATE

DAVID R. REED HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - David R. Reed, son of Florence Reed of Merrimack, NH, and a 1967 graduate of Merrimack High School, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Reed, who was born in Nashua, NH, graduated from the New Hampshire Technical Institute in Concord, NH, in 1971, and from Hesser Business College, Manchester, NH, in 1975.

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The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Reed, an engineer in charge of maintaining computer systems at KSC for Honeywell Federal Systems, lives in Titusville, FL, with his wife, Kathleen, and three children.

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KSC Release No. 87-88-11

For Release:
IMMEDIATE

HORACE W. WOODSIDE, JR. HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Horace W. Woodside, Jr., son of Lela Woodside of Cocoa, FL, and a 1955 graduate of Chester High School, Chester, PA, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Woodside, who was born in Wilmington, NC, attended Muhlenberg College, Allentown, PA, and served in the U.S. Air Force from 1957-1964.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Woodside, staff programmer for the IBM Corporation, lives in Cape Canaveral, FL, with his wife, Marlene.

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For Release:
IMMEDIATE

KELLEE D. ASH HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Kellee D. Ash, daughter of Katherine McGuire Ash of Port St. John, FL, and Douglas J. Ash, Sr. of Grand Rapids, MI, and a 1977 graduate of Bishop Moore High School, Winter Park, FL, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Ash, who was born in Columbus, OH, graduated from the University of Notre Dame in 1982 with a degree in mechanical engineering and is now attending the Florida Institute of Technology, Melbourne, FL.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Ash is a senior engineer at KSC for Lockheed Space Operations Company. She works on flight crew equipment and crew compartment ground support equipment. She lives in Port St. John, FL.

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KSC Release No. 87-88-13

For Release:
IMMEDIATE

MICHAEL S. ETTLEMAN HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Michael S. Ettleman, son of Mr. and Mrs. Fred D. Ettleman of Rolla, MO, and a 1977 graduate of Rolla High School, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Ettleman, who was born in Rolla, MO, graduated in 1986 from the University of Missouri at Rolla with a bachelor of science degree in mechanical engineering.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Ettleman, an associate engineer with the Lockheed Space Operations Company, works on the Thermal Protection System for the Space Shuttle. He and his wife, Shirley, live in Cocoa, FL.

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For Release:
IMMEDIATE

RALPH E. GREGORY HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Ralph E. Gregory, son of Buford S. and Margaret I. Gregory of Craigsville, VA, and a 1973 graduate of Buffalo Gap High School, Swoope, VA, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Gregory, who was born in Craigsville, VA, graduated in 1981 from Gulf Coast Community College, Panama City, FL. He served in the U.S. Air Force from 1974-1978.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Gregory, a Space Shuttle technician for Lockheed Space Operations Company, lives in Cocoa, FL. He and his wife, Natalie, have one son.

November 10, 1988

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For Release:
IMMEDIATE

MARK GAEDCKE HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Mark Gaedcke, son of Mr. and Mrs. Loren Gaedcke Sr. of Richmond, MI, and a 1969 graduate of Anchor Bay High School, New Baltimore, MI, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Gaedcke, who was born in Mt. Clemens, MI, is majoring in electronics at Brevard Community College, Cocoa, FL. He served in the U.S. Naval Reserve from 1970-1976.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Gaedcke is a quality supervisor with the Lockheed Space Operations Company. He has won a number of awards, including the prestigious Silver Snoopy, since joining the space program in 1979. He and his wife, Brenda, live in Titusville, FL, with their two children.

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KSC Release No. 87-88-16

For Release:
IMMEDIATE

JOHN M. JANOKAITIS HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - John M. Janokaitis, son of John and Nancy Janokaitis of Melbourne, FL, and a 1975 graduate of Satellite High School, Satellite Beach, FL, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Janokaitis, who was born in Berea, OH, is a 1979 graduate of the University of Florida, Gainesville, FL, with a bachelor of science degree in journalism.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Janokaitis is a process planner at KSC for the Lockheed Space Operations Company. He lives in Melbourne.

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For Release:
IMMEDIATE

JACKIE B. JOHNSON HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Jackie B. Johnson, son of Mr. and Mrs. Mack B. Johnson of Eden, NC, and a 1957 graduate of John M. Morehead High School, Eden, NC, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Johnson, who was born in Eden, NC, graduated in 1963 from North Carolina State University, Raleigh, NC, with a bachelor of science degree in engineering.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Johnson, a lead engineer at KSC for the Lockheed Space Operations Company lives in Edgewater, FL, with his wife, Zoe. They have four children.

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KSC Release No. 87-88-18

For Release:
IMMEDIATE

STEPHEN E. HOLMES HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Stephen E. Holmes, son of Barbara Holmes of Providence, RI, and a 1966 graduate of Pawtucket (RI) West Senior High, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Holmes, who was born in Pawtucket, RI, graduated in 1971 from Northeastern University, Boston, MA, with a bachelor of science degree in mechanical engineering. In 1983, he was given the prestigious Astronaut's Silver Snoopy Award.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Holmes, an engineer at KSC with Rockwell International Corp., lives in Cocoa Beach, FL, with his wife, Mary Ann. They have one daughter.

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For Release:
IMMEDIATE

PATRICIA-ANN LESLIE HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Patricia-Ann Leslie, a 1967 graduate of Titusville (FL) High School, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Leslie, who was born in New York City, NY, previously won the Astronaut's Silver Snoopy Award and a Manned Flight Awareness Award at KSC.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Leslie, a process planner at KSC for Lockheed Space Operations Company, lives in Cocoa, FL.

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For Release:
IMMEDIATE

ROBERT ALLEN NEAL HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Robert Allen Neal, son of the late James and Ruby Neal, and a 1962 graduate of Dallas (NC) High School, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Neal, who was born in Norfolk, VA, attended Gaston College, Dallas, NC.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Neal, a senior space vehicle mechanical technician for Lockheed Space Operations Company, lives in Titusville, FL. He and his wife, Sadie, who also works at KSC, have two children.

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For Release:
IMMEDIATE

LEE MARK POTTER HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Lee Mark Potter, son of Mr. and Mrs. Orville Potter of Cocoa Beach, FL, and a 1977 graduate of Penfield (NY) High School, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Potter, who was born in Rochester, NY, graduated in 1985 from the University of Central Florida, Orlando, FL, with a degree in mechanical engineering.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Potter, an engineer at KSC with the Lockheed Space Operations Company lives in Cocoa Beach, FL, with his wife, Linda.

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November 10, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

Patti Phelps
Tel. (407) 867-4444
KSC Release No. 87-88-22

For Release:
IMMEDIATE

J. ALLYN SMITH HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - J. Allyn Smith, son of Portia A. Smith of Champaign, IL, and the late George E. Smith, and a 1971 graduate of University High School, Urbana, IL, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Smith, who was born in St. Louis, MO, received a bachelor of science degree in biological sciences-molecular from the Florida Institute of Technology (FIT) in 1971. He then received a master's degree in space sciences in 1979, and a master's degree in space technology in 1984, both from FIT.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Smith, a test director for the Lockheed Space Operations Company, is married to the former Barbara Jones, who also works at KSC. They live in Melbourne, FL.

November 10, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 407 867-2468

Patti Phelps
Tel. (407) 867-4444
KSC Release No. 87-88-23

For Release:
IMMEDIATE

TOM STUDSTILL HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Tom Studstill, son of the late Don and Laura Studstill, and a 1965 graduate of Cocoa (FL) High School, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Studstill was born in Quitman, GA. He received an associate's degree in computer programming in 1974 from Brevard Community College, Cocoa, FL, and a bachelor's degree in business administration from the University of Central Florida, Orlando, FL, in 1977. He served in the U.S. Army from 1967-1970.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Studstill, a management systems specialist at KSC for Lockheed Space Operations Company, won the prestigious Astronaut's Silver Snoopy Award in 1984. He and his wife, Sandra, live in Titusville, FL, with their daughter.

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November 10, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

Patti Phelps
Tel. (407) 867-4444
KSC Release No. 87-88-24

For Release:

IMMEDIATE

CLARK H. HURD HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Clark H. Hurd, formerly of Hinckley, OH, is among 59 Kennedy Center employees who are being honored for their exemplary work at the nation's spaceport.

Hurd, the son of the late Mr. and Mrs. Ray M. Hurd, graduated from Hinckley (OH) High School in 1941 and received his bachelor's degree in education from Baldwin-Wallace College, Berea, OH, in 1948. He earned a master's degree in education from the University of North Carolina. He served in the U.S. Navy from 1943-1946.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Hurd is an engineer with Morton-Thiokol, Inc., and is responsible for support equipment used for the solid rocket boosters on the Space Shuttle. He and his wife, Sheila, live in Melbourne, FL.

November 10, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

Patti Phelps
Tel. (407) 867-4444
KSC Release No. 87-88-25

For Release:
IMMEDIATE

ARTHUR L. TAYLOR HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Arthur L. Taylor, son of Arthur and Merkie Taylor, and a 1962 graduate of Melbourne High School, Melbourne, FL, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Taylor, who was born in Angola, IN, received a bachelor of science degree in electrical engineering from TriState University, Angola, IN, in 1966.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Taylor is a specialist engineer on the Inertial Upper Stage of the Space Shuttle for Boeing Aerospace Operations. He and his wife, Olga, live in Titusville with their two children.

November 10, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

Patti Phelps
Tel. (407) 867-4444
KSC Release No. 87-88-26

For Release:
IMMEDIATE

TIMOTHY A. HALES HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Timothy A. Hales, son of Millard and Elsie Hales of Palm Bay, FL, and a 1966 graduate of Melbourne (FL) High School, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Hales, who was born in Eustis, FL, attended Troy State University in Alabama and served in the U.S. Army from 1966-1968.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Hales is a quality inspector with USBI at Kennedy Space Center. He and his wife, Pamela, live in Melbourne, FL, with their two children.

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November 10, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

Patti Phelps
Tel. (407) 867-4444
KSC Release No. 87-88-27

For Release:
IMMEDIATE

GARY HILL HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Gary Hill, son of Ralph and Opal Hill of Joplin, MO, and a 1957 graduate of Joplin (MO) High School, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Hill, who was born in Joplin, MO, is a battery specialist with Eagle-Picher Industries. He lives in Carl Junction, MO.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Hill and his wife, the former Sheryl Jane Jennings, have four children.

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November 10, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

Patti Phelps
Tel. (407) 867-4444
KSC Release No. 87-88-28

For Release:
IMMEDIATE

KATHLEEN M. CARLETON HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Kathleen M. Carleton, daughter of Richard T. and Virginia L. Sheets of Merritt Island, FL, and a 1976 graduate of Merritt Island High School, is among 59 Kennedy Space Center employees honored for their exemplary work at the nation's spaceport.

Carleton, who was born in Louisville, KY, graduated from Brevard Community College in 1981.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Carleton is a configuration analyst with USBI. Her husband, James, also works for USBI. They live in Titusville and have two children.

November 10, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

Patti Phelps
Tel. (407) 867-4444
KSC Release No. 87-88-29

For Release:
IMMEDIATE

JAY A. BONADIO HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Jay A. Bonadio, a 1977 graduate of Cocoa (FL) High School, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Bonadio, who was born in Rockledge, FL, attended Brevard Community College.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Bonadio is a lead process technician with USBI. He and his wife, the former Theresa Abruzzo, live in Cocoa, FL, with their two children.

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November 10, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

Patti Phelps
Tel. (407) 867-4444
KSC Release No. 87-88-30

For Release:
IMMEDIATE

ROLAND LEBON HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Roland LeBon, son of J. W. LeBon Sr. of Metairie, LA, and a 1969 graduate of John McDonough High School, New Orleans, LA, is among 59 Kennedy Space Center employees honored for their exemplary work at the nation's spaceport.

LeBon, who was born in New Orleans, LA, received a bachelor of science degree in electrical engineering from the University of New Orleans in 1975. He also served in the Louisiana Air National Guard from 1971-1977.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

LeBon, a networks engineer with USBI, lives in Slidell, LA. He and his wife, Felicita, have three children.

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November 10, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

Patti Phelps
Tel. (407) 867-4444
KSC Release No. 87-88-31

For Release:
IMMEDIATE

JOAN E. BRAY HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Joan E. Bray, daughter of Mr. and Mrs. John G. Joyce of Cocoa, FL, and a 1961 graduate of Princess Anne High School, Virginia Beach, VA, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Bray, who was born in Portsmouth, VA, currently attends Brevard Community College in Cocoa, FL.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Bray, is senior administrative aide with USBI. She and her husband, Raymond, live in Titusville, FL.

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November 10, 1988

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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 407 867-2468

Patti Phelps
Tel. (407) 867-4444
KSC Release No. 87-88-32

For Release:
IMMEDIATE

GORDON L. MORTON HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Gordon L. Morton, son of Cora Morton of Centerville, PA, and a resident of Edgewater, FL, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Morton, who was born in Union City, PA, attended North East (PA) Joint High School. He served in the U.S. Army from 1947-1948.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Morton, a clean room mechanic for the Wiltech Corporation, has worked at KSC since 1965. He and his wife, Mary, have three children.

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November 10, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

Patti Phelps
Tel. (407) 867-4444
KSC Release No. 87-88-33

For Release:
IMMEDIATE

RICK FLANAGAN HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Rick Flanagan, son of John and Anna Mary Flanagan of Buffalo, MT, and a 1981 graduate of Hobson (MT) High School, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Flanagan, who was born in Lewistown, MT, received a bachelor of science degree in mechanical engineering from Montana State University, Bozeman, MT, in 1986.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Flanagan is a design engineer at KSC for the Lockheed Space Operations Company. He and his wife, the former Bonnie Kay Brantz, live in Titusville.

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November 10, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
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Patti Phelps
Tel. (407) 867-4444
KSC Release No. 87-88-34

For Release:
IMMEDIATE

RONALD H. FELDHAUSER HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Ronald H. Feldhauser, son of Ruth and Herb Feldhauser of South Daytona, FL, and a 1960 graduate of Mainland High School, Daytona Beach, FL, is among 59 Kennedy Space Center employees who are being honored for their exemplary work at the nation's spaceport.

Feldhauser, who was born in Grayling, MI, studied drafting at Daytona Beach (FL) Junior College.

The 59 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned space flight program.

The Honorees will be given a VIP tour of the Kennedy Space Center and are invited to attend a special reception. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Feldhauser is a senior drafter/checker for BAMSI, Inc. He and his wife, the former Nancy Nugent, live in Merritt Island, FL.

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November 10, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

For Release:

Nov. 7, 1988

George H. Diller
Kennedy Space Center
Tel. 407/867-2468

Release No. 86-88

NOTE TO EDITORS/NEWS DIRECTORS

MAGELLAN MISHAP BOARD TO RELEASE FINDINGS WEDNESDAY, NOV. 9

KENNEDY SPACE CENTER, Fla. -- The Magellan Electrical Mishap Investigation Board will release its findings, recommendations and observations at a press briefing to be held on Wednesday, Nov. 9, at 1 p.m. Eastern Standard Time.

The board was appointed by NASA Headquarters after a localized electrical fire occurred aboard the Magellan spacecraft on Oct. 17 while attempting to connect a test battery which then became damaged.

Presenting the findings will be Jon R. Busse, director of engineering at the Goddard Spaceflight Center, the chairman of the Magellan Electrical Mishap Investigation Board.

The briefing will be held in the KSC News Center auditorium and will also be carried on NASA Select. A two-way question and answer capability will be available at NASA Headquarters in Washington and at other NASA centers. NASA Select TV is carried on Satcom F-2R, transponder 13, located at 72 degrees West longitude. Sound only is also available by dialing direct to the V-2 audio circuits at 407/867-1220...1240...or 1260.

Those media representatives who will require badges to attend the briefing in person should contact the KSC News Center at 867-2468 to arrange for accreditation.

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NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

For Release:

Sarah Keegan
Headquarters, Washington, D. C.
(Phone: 202/453-8536)

October 31, 1988

Lisa Malone
Kennedy Space Center, Fla.
(Phone: 407/867-2468)

RELEASE: 88-147

ATLANTIS SCHEDULED FOR ROLLOUT TO LAUNCH PAD ON NOV. 2

The Space Shuttle orbiter Atlantis is currently scheduled for rollout to Launch Pad 39-B no earlier than 12:01 a.m. EST Wednesday, Nov. 2.

Since March of 1987, KSC workers have been modifying and preparing the shuttle Atlantis for its upcoming launch. Nearly 200 modifications were implemented - primarily the modifications previously made to Discovery.

Atlantis was transferred from its processing hangar to the Vehicle Assembly Building Oct. 22 and was bolted to the huge rust-colored external tank and white solid rocket boosters.

Space center workers completed the Shuttle Interface Test which verified the connections between the orbiter Atlantis, the external tank, solid rocket boosters and mobile launcher platform. This test also verifies the various components of the SRBs including the new joint heaters, the hydraulic power units and flight instrumentation.

While Atlantis was being prepared for flight in the Orbiter Processing Facility, the redesigned solid rocket boosters were being stacked in the Vehicle Assembly Building. The stacking operation began July 30 with the left aft booster and was completed on Sept. 20. The next processing step, mating the external tank to the boosters, was accomplished on Sept. 20.

Once at the pad, workers will begin validating connections between the launch pad and the shuttle vehicle elements. A "hot fire" of the orbiter's auxiliary power units and the solid rocket boosters hydraulic power units is planned shortly after the vehicle arrives at the pad.

NASA News

National Aeronautics and
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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



Patricia Phillips
(407) 867-2468

For Release:

Oct. 26, 1988

KSC Release No. 85-88

PLAYALINDA BEACH TO BE CLOSED FOR STS-27 LAUNCH

KENNEDY SPACE CENTER, Fla. -- Playalinda Beach will be closed to visitors as early as sundown Sunday night, Oct. 30, in preparation for the launch of the STS-27 mission in November.

The beach closing is required because of the rollout of the orbiter Atlantis to Launch Pad 39B. That rollout is currently scheduled for no earlier than 12:01 a.m. Monday, Oct. 31. Launch is targeted for late in November.

Based on a Monday, Oct. 31 rollout, Playalinda Beach would be closed as of sundown Sunday night. The beach, part of the Canaveral National Seashore, will remain closed until the morning after launch. The beach will reopen at normal hours at launch plus one 1 day.

Beachgoers who had planned to visit Playalinda Beach this weekend should call the Canaveral National Seashore office at (407) 267-1110 for information on any changes in the beach closing time.

Information may also be obtained by calling a recorded message at the NASA News Center at (407) 867-2525.

Other Canaveral National Seashore beaches such as Apollo Beach will remain open after rollout. They may be reached through the north beach entrance south of New Smyrna Beach.

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NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 407 867-2468

For Release:
Oct. 18, 1988

Karl Kristofferson
Area Code 407/867-2468

KSC Release No. 83-88

NOTICE TO EDITORS/NEWS DIRECTORS

STS 26 CREW TO PAY RESPECTS TO LOCAL COMMUNITY, THANK KSC WORKERS

KENNEDY SPACE CENTER, Fla. -- Discovery crewmembers will return to Florida and Kennedy Space Center October 24-25 to pay their respects to the local community and thank KSC workers for their role in the successful STS-26 return-to-flight mission.

Shuttle astronauts Rick Hauck, Dick Covey, Mike Lounge, George "Pinky" Nelson and David Hilmers will arrive at Patrick AFB at 4:30 p.m., Monday, Oct. 24. They will leave Patrick AFB about 5 p.m. in a special motorcade that will wend its way north on State Road A1A to the Holiday Inn, Cocoa Beach, where they will take part in evening community sponsored events.

The following day, Oct. 25, the STS-26 crew will return to KSC for a 9 a.m. ceremony to express their thanks to KSC workers. The ceremony will be held in the parking lot at the Launch Complex 39 turn basin, adjacent to the press site dome.

Welcoming remarks and introductions will be made by KSC Director Forrest S. McCartney, to be followed by remarks from KSC Launch Director Bob Sleck. During the proceedings, STS-26 commander Rick Hauck will give back to McCartney the autograph book containing the names of KSC employees which the crew carried into space aboard Discovery. McCartney will present to Hauck and his crewmates 16x20 color photographs of the STS-26 liftoff.

Media representatives are invited to attend the KSC ceremony, and should be at the KSC press site dome no later than 8 a.m., Oct. 25. Those with permanent press badges or STS-26 mission badges may proceed directly to the press site dome via KSC gates 2 (SR 3) and 3 (U.S. 1). STS-26 mission badges will be honored Oct. 24-25. Media without either of the above badges should contact the press site at 407-867-2468 for badging information.

No press conference or media interviews with the STS-26 crew will be conducted during their visit to KSC. For information about the Oct. 24 motorcade and community events involving the STS-26 crew, media representatives should contact the Tourist Development Council at 407-453-2211.

The KSC STS-26 crew ceremony will not be carried on NASA Select Television, but may be monitored on KSC's V-2 Audio Circuit, available by calling 407-887-1220, 1240 or 1260.

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NASA News

National Aeronautics and
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John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Oct. 8, 1988

George H. Diller
Tel. 407/867-2468

KSC Release No. 82-88

NOTICE TO EDITORS/NEWS DIRECTORS:

MAGELLAN BRIEFING AND PHOTO OPPORTUNITY AVAILABLE ON OCT. 12

KENNEDY SPACE CENTER, Fla.-- Magellan, the planetary spacecraft to be deployed by the Orbiter Atlantis toward the planet Venus next April, arrived at KSC last weekend. Since that time the various spacecraft elements have been unpacked to prepare them for their integration and checkout.

There will be a presentation on Magellan on Wednesday, Oct. 12, which will include a briefing for the press on plans for the spacecraft's final assembly, testing, and launch preparation at KSC. A brief overview of Magellan's planetary objective will also be presented. Participating will be Jo Ann Morgan, director of Payloads Projects Management for NASA-KSC, and Charles Brown, Magellan program manager for Martin Marietta, the manufacturer of the spaceprobe.

The press briefing will begin at 10:30 a.m. in the KSC News Center Auditorium. At its conclusion, media representatives will be transported to the spacecraft checkout facility to view the various spacecraft elements being prepared for integration.

Because of Magellan's susceptibility to certain contaminants, those attending the showing are asked to refrain from using hairspray or makeup on the day of the event. Also, long pants and low-heeled, closed-toed shoes will be required to gain access to the clean room area. White room attire will be provided.

No flame producing devices can be allowed in any part of the spacecraft checkout facility. Photographers please note that available light only may be used and all equipment must be self-contained using internal power.

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NASA News

National Aeronautics and
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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Pet Phillips
(305) 867-2468

Oct. 7, 1988

KSC Release No. 81-88

NASA/KSC SPONSORS 1989 PROCUREMENT BRIEFING OCT. 20

KENNEDY SPACE CENTER, Fla. -- Upcoming procurements and contracts in construction, supply, technology development, and research and design will be presented to potential bidders Thursday, Oct. 20 in the Galaxy Theater at Spaceport, USA.

The annual briefing, hosted by the NASA/KSC Industry Assistance Office, will provide information on Fiscal Year 1989 contract opportunities with NASA, prime aerospace contractors, and related opportunities at Patrick Air Force Base. Reservations are required, and will be accepted up to the theatre's seating capacity of 500.

There will be a \$5 registration charge on the day of the briefing. Reservations must be in by noon, Oct. 19, according to Norm Perry, KSC Industry Assistance Officer.

For more information and reservations, contact the NASA/KSC Industry Assistance Office at (407) 867-7353 or 867-7344.

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NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

For Release:

Sept. 25, 1988

George Diller
Area Code 407/867-2468

KSC Release No. 79 - 88

SPACE SHUTTLE WEATHER LAUNCH COMMIT CRITERIA

The return to flight of the Space Shuttle is accompanied by significant changes in the meteorological guidelines associated with committing to a liftoff. Extensive reviews were conducted as a result of the Challenger accident and the loss of an Atlas Centaur rocket, both involving a weather factor.

The launch weather guidelines involving the Space Shuttle and expendable rockets have converged in many areas, while also preserving some distinction for the characteristics of each launch vehicle. The criteria are broadly conservative, thus assuring avoidance of conditions possibly adverse to the vehicle. Also, additions to staff have been made both in the weather forecasting and weather research areas.

For the launch of the STS-26 mission, weather "outlooks" will be provided by the Cape Canaveral Forecast Facility beginning at Launch minus 5 days. These will include weather trends, and their possible effects on launch day.

A formal prelaunch weather briefing will be held on Launch minus 1 day which will be a specific weather briefing for all areas of Space Shuttle launch operations.

During the countdown, formal weather briefings will occur as follows:

L-14 hr 0 min: Briefing for removal of Rotating Service Structure
L-9 hr 05 min: Briefing for propellant loading and the launch
L-4 hr 30 min: Briefing for astronaut ingress and the launch
L-3 hr 50 min: Astronaut weather briefing
L-0 hr 45 min: Briefing for the launch and RTLS
L-0 hr 09 min: Poll all weather constraints

The basic weather parameters on the pad at liftoff must be:

Temperature: Prior to external tank propellant loading, tanking will not begin if the 24 hour average temperature has been below 41 degrees. After tanking is complete, the countdown will not continue if the temperature exceeds 99 degrees; if the wind is 5 knots or greater, less than 37 degrees; or, if the wind is below 5 knots, 47 degrees.

Wind: No higher than 24 knots or, if the wind is within 30 compass degrees of South, not greater than 17 knots. The Space Shuttle will not be launched within 30 minutes of the time a determination has been made that the upper wind profile will adversely affect the performance of the launch vehicle.

Precipitation: None at the launch pad or within the flight path.

Lightning (and electric fields with triggering potential):

- None detected within 10 nautical miles of the launch pad or below 100,000 feet within the vehicle's path of flight within 30 minutes prior to launch, unless the source of lightning has moved more than 10 nautical miles away from the launch pad or the flight path.

- The one-minute average of the electric field mill network, used to measure electric fields, shall not exceed -1 or +1 kilovolt per meter within five nautical miles of the launch pad at any time within 15 minutes prior to launch. This shall not apply if there are no clouds within 10 nautical miles of the launch pad, and if it can be determined that smoke or fog are causing abnormal readings.

Clouds: (types known to contain hazardous electric fields)

- The Space Shuttle may not be launched if the planned flight path is through a layer of clouds with a thickness of 4,500 feet or greater where the temperature of any part of the layer is between 32 degrees F. and -4 degrees F.

- The Space Shuttle may not be launched if the planned flight path is through any cloud type that extends to an altitude where the temperature is between 32 degrees and -4 degrees F. if this is associated with disturbed weather within five nautical miles of the flight path.

-The Space Shuttle may not be launched through an opaque cloud which has become detached from a thunderstorm within three hours before launch, or within 5 nautical miles of thunderstorm debris clouds not able to be monitored by the field mill network, or producing a radar return showing light rain.

-The Space Shuttle may not be launched through or within 10 nautical miles of cumulus type clouds with tops extending higher than the -4 degree F. temperature level, or of the nearest edge of any cumulonimbus or thunderstorm cloud including its associated anvil.

-The Space Shuttle may not be launched through cumulus type clouds with tops extending into temperatures 41 degrees F. or colder, or within 5 nautical miles of clouds with tops extending higher than the 14 degree F. temperature level.

CONTINGENCY LANDING CRITERIA

Weather conditions for a landing also affect the launch criteria since the possibility exists for a Return To Launch Site Abort (RTLS) or for emergency landings at other off-site locations. The landing criteria for the KSC Shuttle Landing Facility, the Trans-Atlantic Abort Sites (TAL), and the Abort Once Around (AOA) sites of Edwards Air Force Base, and White Sands Space Harbor are:

- Cloud coverage less than 5 tenths below 8,000 feet with a clear line sight to the end of the runway.

- No detached opaque thunderstorm anvil cloud within 10 nautical miles of the runway or within 5 nautical miles of the approach path extending to 30 nautical miles distance.

- For RTLS and the TAL sites, no thunderstorms, lightning, or precipitation within 20 nautical miles of the runway, or within 10 nautical miles of the approach path extending to 30 nautical miles distance.

- Visibility for RTLS, 7 statute miles or greater

- Visibility for the TAL sites and AOA, 5 statute miles or greater where MLS instrument landing capability is available; otherwise 7 statute miles.

- Crosswind component not to exceed 12 knots
- Headwind not to exceed 25 knots
- Tailwind not to exceed 10 knots
- Sun Angle on final approach not within 10 degrees in azimuth and 0 to 20 degrees in elevation

RECOVERY AREAS

Solid Rocket Booster Recovery Site

- Visibility 1.5 nautical miles or greater
- Sea State not to exceed Code 5 (8-13 feet)

Offshore Crew Recovery Area

- Wind not greater than 25 knots
- Seas not greater than 8 feet
- Visibility not less than 1/2 nautical mile
- Ceiling not less than 500 feet

The instrumentation considered highly desirable for the forecaster to develop the downrange and launch clearance forecast are:

- Radar
- Field Mill Network
- Weather Reconnaissance Aircraft
- Rawinsonde balloon sounding data
- Satellite data and photographs
- Meteorological Data Display System (MIDDS)

A "Good Sense Rule" has been implemented:

"Even when constraints are not violated, if any other hazardous conditions exist, the launch weather officer will report the threat to the launch director. The launch director may hold at any time based on the instability of the weather."

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NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 305 867-2468



Lisa Malone
Kennedy Space Center, Fla.
(Phone: AC 407/867-2468)

For Release:
September 24, 1988

KSC Release No. 78-88

STS-26 LAUNCH COUNTDOWN CLOCK SCHEDULED TO BEGIN SEPTEMBER 26

The countdown for the seventh launch of the orbiter Discovery is scheduled to begin at 12:01 a.m. EDT Monday, Sept. 26 at the T-43 hour mark. The countdown includes 38 hours and 59 minutes of built-in hold time leading up to the opening of the launch window at 9:59 a.m. EDT on Thursday, Sept. 29. The launch window for that date extends for two and a half hours, to 12:29 p.m.

There are a few changes between this countdown and the previous shuttle countdowns. One of the most visible changes is the addition of several built-in holds to give the launch team time to resolve any problems that may occur. Another change is that the flight crew will be awakened approximately 25 minutes earlier than in previous countdowns. The crew will be wearing new partial pressure suits as part of the escape system. It takes a little longer for the astronauts to get into the orbiter because these suits are bulky. Another new item for this countdown is the installation of the new crew escape pole at the T-11 hour mark.

At the start of the countdown, the launch team in Firing Room 1 in the Launch Control Center powers up the Shuttle vehicle, if it is not already powered up, and verifies the data processing system and backup flight control system are operating. Flight software stored in the orbiter's twin memory banks will be reviewed, computer-controlled display systems will be activated, and the backup flight system General Purpose Computer will be loaded.

Preparations also start at the liquid oxygen and liquid hydrogen storage farms for loading the external tank with super cold, or cryogenic, propellants. The main propulsion system and Shuttle main engines are prepared for cryogenic loading, orbiter navigation aids are turned on and tested, and the Inertial Measurement Units are activated.

In parallel with these activities, the launch team prepares for loading Discovery's onboard fuel cell storage tanks with liquid oxygen and liquid hydrogen reactants. Also performed at the start of the countdown is the final stowage, microbial sampling and water level adjustment of the crew waste management system.

At T-28 hours, after final payload bay closeout preparations, Discovery's payload bay doors will be closed for flight.

At T-27 hours, the countdown will enter its first built-in hold. This is an eight-hour hold that will extend from 4 p.m. to midnight Monday, Sept. 26. When the countdown resumes, the launch pad will be cleared of all personnel in preparation for loading the fuel cell storage tanks.

Servicing of the liquid oxygen and liquid hydrogen fuel cell supply tanks is scheduled to start at the T-25 hour mark. Servicing takes approximately five hours.

When servicing of the fuel cell tanks has been completed, the pad will be reopened for normal work, and the countdown will enter the second hold. This is another eight-hour hold to give team members time to resolve any issues that may have occurred during the loading process. This hold will extend from 8 a.m. to 4 p.m. Tuesday, Sept. 27.

When the countdown resumes, technicians will complete final vehicle and facility closeouts, disconnect the orbiter mid-body umbilical unit used to load the super cold fuel cell reactants into the orbiter, and begin configuring Discovery's cockpit for flight.

The orbiter's flight control system and navigation aids will be turned on, Discovery's communications systems will be activated, and switches in the cockpit will be configured for loading of the external tank. The stowable mission specialist seat, where George "Pinky" Nelson will sit for the launch and landing, will be installed in the orbiter's middeck.

The countdown will enter a standard built-in hold at the T-11 hour mark at midnight Tuesday, Sept. 27. The 19-hour, 39-minute hold will extend to 7:39 p.m. Wednesday, Sept. 28.

When the countdown resumes, the Rotating Service Structure (RSS) will be retracted back to the launch position. This operation is scheduled to begin about 7:39 p.m. the night before launch. Also scheduled for this time is the installation of the crew escape pole in the orbiter's crew compartment.

At T-9 hours, the onboard fuel cells will be activated, and the launch team will begin evacuating the blast danger area at T-8 hours, or about 10:39 p.m. Wednesday. At T-7 hours, 30 minutes, conditioned air that is flowing through the orbiter's payload bay and other areas will be switched to gaseous nitrogen in preparation for loading the external tank with the super-cold liquid propellants. The Inertial Measurement Units will transition from the warm up stage to the operate/attitude determination mode at T-6 hours and 45 minutes.

The countdown will enter another planned built-in hold at the T-6 hour mark at approximately 12:39 a.m. launch day. During this one-hour hold, final preparations for loading the external tank will be completed and a pre-tanking weather briefing will be conducted.

Chilldown of the lines that carry the cryogenic propellants to the external tank will begin at the T-6 hour mark, at 1:39 a.m. Thursday. Filling and topping of the external tank should be complete at the planned hold at T-3 hours which will start at 4:39 a.m. During the two-hour planned hold, an ice inspection team will perform a survey of the tank's outer insulation, and the closeout crew will begin configuring the crew module and white room for the flight crew's arrival. Liquid oxygen and liquid hydrogen will be in a stable replenish mode during this time to replace the propellant that "boils" off.

Also during that hold, at about 5:04 a.m., the STS-26 flight crew members will be awakened. After eating breakfast, the crew will receive a briefing on weather conditions around the world via satellite from Mission Control-Houston.

The flight crew will suit up in their new partial pressure suits, then leave the Operations and Checkout Building at about 6:44 a.m., at T-2 hours and 55 minutes. They will arrive at the Orbiter Access Arm white room by about 7:09 a.m. (T-2 hours, 30 minutes) where they will get ready to enter the cockpit.

Just prior to the T-1 hour mark, the test team and the flight crew will get another weather update, including observations from an astronaut flying the Shuttle Training Aircraft in the KSC area.

Two scheduled holds of ten minutes each begin at T-20 minutes and T-9 minutes, or at 9:19 a.m. and 9:40 a.m. During the final hold, the flight crew and ground team receive the NASA Launch Director's and the Mission Management team's final "go" for launch.

Milestones after the T-9 minute mark include start of the ground launch sequencer, retraction of the orbiter access arm at T-7 minutes, 30 seconds, start of the orbiter's Auxiliary Power Units at T-5 minutes, pressurization of the liquid oxygen tank inside the external tank at T-2 minutes, 55 seconds, pressurization of the liquid hydrogen tank at T-1 minute, 57 seconds and the electronic "go" to Discovery's onboard computers to start their own terminal countdown sequence at T-31 seconds. The orbiter's three main engines will start at T-6.6 seconds.

Liftoff is scheduled to occur during a two and a half hour launch window extending from 9:59 a.m. to 12:29 p.m. (EDT).

COUNTDOWN MILESTONES

Launch - 3 Days (Monday, Sept. 26)

Perform the call to stations at T-43 hours. Check out backup flight system and review flight software stored in mass memory units and display systems. Load backup flight system software into Discovery's fifth general purpose computer.

Begin stowage of flight crew equipment. Inspect the orbiter's mid and flight decks and remove crew module platforms. Start external tank loading preparations and prepare Shuttle main engines for main propellant tanking and flight.

Enter first planned built-in hold at T-27 hours for a duration of eight hours.

Launch - 2 Days (Tuesday, Sept. 27)

Resume Countdown. Start preparations for servicing fuel cell storage tanks and begin final vehicle and facility closeouts for launch.

Clear launch pad of all personnel and load liquid oxygen and liquid hydrogen reactants into Discovery's fuel cell storage tanks.

Complete loading the fuel cell storage tanks. Open pad and continue orbiter and ground support equipment closeouts.

Enter planned built-in hold at T-19 hours for a duration of eight hours.

Resume countdown. Activate orbiter flight control, navigation and communications systems. Perform orbiter ascent switch lists in the flight deck and middeck and install mission specialist seat on the middeck. Prepare rotating service structure for retraction.

Launch - 1 Day (Wednesday, Sept. 28)

Enter planned hold at T-11 hours for a duration of 19 hours and 39 minutes.

Resume countdown. Retract rotating service structure. Install time critical flight crew equipment, perform the pre-ingress switch list and take crew seat oxygen samples.

Start the fuel cell flow-through purge. Install the crew escape pole.

Activate orbiter fuel cells. Configure communications at Mission Control-Houston for launch. Clear the launch pad of all personnel and switch Discovery's purge air to gaseous nitrogen.

Launch Day (Thursday, Sept. 29)

Enter one-hour planned built-in hold at T-6 hours.

Resume countdown. Launch team verifies there are no violations of launch commit criteria prior to cryogenic servicing of the external tank. Start loading the external tank with cryogenic propellants.

Complete filling the external tank with its flight load of liquid hydrogen and liquid oxygen propellants. Perform open loop test with Eastern Space and Missile Center and conduct gimbal profile check of Orbital Maneuvering System engines.

Perform Inertial Measurement Unit preflight calibration and align Merritt Island Launch Area tracking antennas.

Enter 2 hour hold at T-3 hours. Wake flight crew. Closeout crew and External Tank ice inspection crew proceeds to launch pad 39-B.

Resume countdown at T-3 hours. Complete closeout preparations in the white room and cockpit switch configurations. Crew departs Operations and Checkout Building for the pad.

Flight crew enters orbiter. Astronauts perform air-to-ground voice checks with Mission Control-Houston. Close out crew module and close Discovery's crew hatch. Begin Eastern Space and Missile Center final network open loop command check, perform hatch seal and cabin leak checks, begin the Inertial Measurement Unit preflight alignment and Range Safety closed loop test. The white room is closed out and the closeout crew moves to fallback area. Primary ascent guidance data is transferred to the backup flight system.

Enter planned 10 minute hold at T-20 minutes.

Resume countdown. Transition orbiter onboard computers to launch configuration and start fuel cell thermal conditioning. Close orbiter cabin vent valves. Backup flight system transitions to launch configuration.

Enter planned 10 minute hold at T-9 minutes.

Resume Countdown.

Start automatic Ground Launch Sequencer (T-9 minutes)
Retract orbiter crew access arm (T-7:30)
Start mission recorders (T-5:30)
Start APU's. Arm SRB and ET range safety safe and arm devices
(T-5)
Start liquid oxygen drainback (T-4:55)
Start orbiter aerosurface profile test (T-3:55)
Orbiter transfers to internal power (T-3:30)
Start MPS gimbal profile test (T-3:30)
Pressurize liquid oxygen (LO2) tank/retract GO2 vent arm (T-2:55)
Fuel cells to internal reactants (T-2:35)
Pressurize liquid hydrogen (LH2) tank (T-1:57)
LPS go for start of orbiter automatic sequence (T-0:31 seconds)
Start SRB gimbal profile test (T-0:21)
Orbiter main engine start (T-0:6.6)
SRB ignition and liftoff (T-0)

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NASA News

National Aeronautics and
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John F. Kennedy Space Center

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For Release:

Sept. 22, 1988

KSC Release No. 77-88

GENERAL AVIATION RESTRICTED FROM KSC AIRSPACE DURING STS-26 LAUNCH

KENNEDY SPACE CENTER, Fla. -- The airspace around KSC will be restricted to official aircraft and will be off-limits to general aviation pilots for the launch of STS-26, now scheduled for Sept. 29.

NOTAMS must be checked by pilots prior to flights near the KSC area. Pilots are warned that violations of the restricted airspaces can result in serious penalties, including suspension or revocation of pilot privileges.

Official aircraft supporting the launch will be in the air. Pilots must be aware that wandering into a restricted area is not only forbidden, but will also create a safety hazard to support aircraft and the errant pilot.

Anyone wishing to view the launch from the air should stay well west of the Indian River. Be advised that the airspace in that area is expected to be extremely congested with both controlled and uncontrolled aircraft.

Pilots should also be aware of the SRB exhaust cloud that occurs after launch, and they should stay at least five miles away from that cloud, even if it drifts out of the restricted area. Research aircraft will be flying into and out of the cloud, and visibility will be limited.

In general, the airspace restrictions cover a variety of air ranges from now through launch. In addition to the normal restrictions over KSC and Cape Canaveral Air Force Station, the launch will require that all private aircraft stay out of an area roughly bounded by the west side of the Indian River on the west, the Trident Basin (State Road 528 area) on the south, slightly north of Haulover Canal, and three miles out into the Atlantic on the east. The restrictions are "surface to unlimited." These launch-specific restrictions begin 3 hours before launch.

(more)

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Pilots should consult the Sept 22 edition of the Jacksonville Sectional Aeronautical Chart. In addition, they should contact the St. Petersburg Flight Service Station at 1-800-99-27433 (1-800-WX-BRIEF). Advisories will be available from the Patrick Approach Control (VHF 119.25 megahertz), Space Center Executive Airport Tower (TIX) (VHF 118.9 megahertz), or the NASA Tower (126.3 megahertz).

Pilots should also refer to the current Patrick Air Force Base release on restricted air spaces.

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For Release:

Sept. 21, 1988

KSC Release No. 76-88

KSC AREA BOATING RESTRICTED FOR STS-26 LAUNCH

KENNEDY SPACE CENTER, Fla. -- Waterways and boating around the Kennedy Space Center will be strictly controlled for the launch of the Space Shuttle Discovery on the STS-26 mission.

Some safety and security requirements, which include new U.S. Air Force Range Safety impact limit lines, will go into effect as early as Monday, Sept. 26. Other requirements will go into effect at sundown, Wednesday, Sept. 28, the night before Discovery's launch. The launch window opens at 9:59 a.m. Thursday, Sept. 29.

The U.S. Coast Guard, the U.S. Fish and Wildlife Service, and KSC security forces will share responsibility for enforcing the boating guidelines. A general description of the restricted areas follows.

Banana River: security limits begin at the Banana River Barge Canal (State Road 528) on the south and extend north. These restrictions will go into effect at sundown, Sept. 28.

Atlantic Ocean: a phased security/safety approach will be used. Beginning at sundown the night before launch, a general exclusion zone will be in effect three miles offshore from Haulover Canal on the north to the entrance of Port Canaveral on the south. On launch day, ocean-going traffic will also be restricted on a path five miles either side of a line 30 miles due east from Pad B (latitude 28 degrees, 37 minutes, 37.26 seconds north; longitude 80 degrees, 37 minutes, 15.09 seconds west). The "flight path" exclusion will be in addition to the general three-mile exclusion zone.

Mosquito Lagoon: will be off limits from Haulover Canal south to all boats beginning at dusk, Monday, Sept. 26.

Indian River: restrictions apply east of the main channel, from the NASA Causeway north to the Haulover Canal, beginning at sundown the night before launch.

Boating restrictions will be lifted approximately one hour after launch.

NASA News

National Aeronautics and
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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Sept. 20, 1988

News: Area Code 407/867-2468

Photo/TV: Area Code 407/867-7819

NEWS CENTER - HOURS OF OPERATION

KENNEDY SPACE CENTER, Fla. - These are the hours of operation for the Kennedy Space Center Complex 39 News Center from today through the conclusion of the STS-26 mission. The launch of the STS-26 mission is scheduled for no earlier than 9:59 a.m. EDT on Thursday, Sept. 29.

Wednesday, Sept. 21	-	8 a.m. - 4:30 p.m.
Thursday, Sept. 22	-	8 a.m. - 4:30 p.m.
Friday, Sept. 23	-	8 a.m. - 4:30 p.m.
Saturday, Sept. 24	-	8 a.m. - 4:30 p.m.

The countdown for the STS-26 launch is scheduled to be picked up at the T minus 43-hour mark at 12:01 a.m. EDT on Monday, Sept. 26.

On Sunday, Sept. 25, the Complex 39 News Center will open at 8 a.m. and remain open on a 24-hour-a-day basis until the day of landing. Range safety issues require that the number of press permitted at the Complex 39 Press Site during final countdown and launch be limited to 1,800 news media representatives.

A supplementary press site will be operated on the NASA Causeway between the Kennedy Space Center and Cape Canaveral Air Force Station from 12:01 a.m. EDT the morning of launch until shortly after liftoff for those media representatives who do not have the special credentials required for the Complex 39 Press Site during that period.

BADGING STATION

The hours of operation of the badging station at Gate 2 on Florida Route 3 at the south entrance to the center are as follows:

Saturday, Sept. 24	-	8 a.m. - 8 p.m.
Sunday, Sept. 25	-	8 a.m. - 8 p.m.
Monday, Sept. 26	-	8 a.m. - midnight
Tuesday, Sept. 27	-	8 a.m. - midnight
Wednesday, Sept. 28	-	6 a.m. to 1 hour before launch on Sept. 29

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NASA News

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For Release:

Sept. 19, 1988

KSC Release No. 73-88

KSC AREA BRIDGE OPENINGS TO BE CONTROLLED FOR STS-26 LAUNCH

KENNEDY SPACE CENTER, Fla. -- The opening and closing of bridges over waterways surrounding the Kennedy Space Center will be strictly controlled during the hours immediately before and after the launch of the Space Shuttle Discovery on the STS-26 mission.

Bridges affected by launch requirements include:

- Canaveral Harbor Barge Canal (State Road 401, South of Cape Canaveral Air Force Station Gate 1);
- Indian River Causeway, Intercoastal Waterway at Addison Point (NASA Causeway, west);
- Merritt Island Barge Canal, Merritt Island, State Road 3 (A1A);
- Haulover Canal Bridge, State Road 3 (north end of KSC).

Restraints on bridge openings for boat traffic will begin three hours before launch (L-3). The bridges may be opened for 5 minutes at the following points in the launch countdown: L-180 minutes, L-150 minutes, L-120 minutes, L-90 minutes, and L-65 minutes.

Bridges will remain closed to boat traffic from L-60 minutes to 90 minutes after liftoff (L+90). They may then open for 5 minutes at L+90 minutes, L+120 minutes, and L+150 minutes. Bridge operations will return to normal at an hour and a half (L+180 minutes) after launch.

Should Discovery be required to land at KSC, all bridges would remain closed to boat traffic from 45 minutes before landing to one hour after landing.

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NASA News

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For Release:
Sept. 7, 1988

KSC Release No. 71-88

STS-26 COUNTDOWN DEMONSTRATION TEST SCHEDULED FOR SEPT. 8

KENNEDY SPACE CENTER, Fla. -- A full dress rehearsal for the STS-26 launch countdown is underway this week at Kennedy Space Center. The Terminal Launch Countdown Demonstration Test (TCDT), involving the STS-26 prime crew, will culminate with a simulated T-0 at 10 a.m. Thursday, Sept. 8.

The five-member veteran flight crew arrived at KSC's Shuttle Landing Facility on Tuesday to participate in the practice countdown. The STS-26 crew is comprised of commander Frederick Hauck, pilot Richard Covey, and mission specialists John "Mike" Lounge, George "Pinky" Nelson and David Hilmers.

While here at KSC the flight crew will spend their nights in the astronaut quarters located in the Operations and Checkout Building. The crew will be trained in emergency egress procedures at Launch Pad 39-B including a practice drive in the M113 tracked vehicles. At the pad, they will become familiar with the location of breathing apparatus, other emergency equipment and the slide wire basket system. The astronauts will not ride in the baskets.

One of the other routine activities for the crew while here for the TCDT is a briefing by Shuttle engineers. The briefings, scheduled the day before the test, are designed to bring the flight crew up to speed on the status of the vehicle and any unresolved issues.

Objectives of the test include establishing timelines and validating sequences involved in getting the flight crew in their new partial pressure suits and in entering the orbiter's cockpit. The test also offers an occasion for the flight crew and the KSC launch team to work together in a launch day configuration. Inter-agency interfaces required to support the terminal countdown will be evaluated. In addition, countdown abort safing steps will be exercised by the launch team.

"This is another opportunity to demonstrate how well trained and disciplined we are as a team. It should be another confidence builder and we're looking forward to it," said KSC Launch Director Bob Sieck.

The countdown began at the T-19 hour mark on Wednesday at 6 a.m. Events in the countdown will be condensed or simulated to represent activities that occur during the actual launch countdown and/or to configure the orbiter for the test.

Discovery will be powered up for the test and its onboard systems will be activated. One of the differences between this test and previous TCDTs is the installation of the new crew escape pole in Discovery's crew compartment at the T-10 hour mark.

The countdown will proceed down to the T-3 hour mark and hold for eight hours, 40 minutes which includes some contingency time. During this hold the crew will be awakened and have breakfast. Also, the power reactant storage and distribution system will be purged and pressurized during this hold.

The count will pick back up at 6:40 a.m. Thursday at which time the flight crew receives their standard weather briefing. Afterwards they don their flight clothing and depart for the launch pad.

Once at the pad, the closeout crew will assist the astronauts in getting into the cockpit. Each crew member will establish communications with the orbiter test conductor in Firing Room 1.

Two 10-minute built-in holds are planned: at the T-20 minute and T-9 minute marks. For the purposes of the test, the countdown will be halted at the T-5 second mark at 10 a.m. The test will be over once the launch team has performed recycle and safing operations.

After exiting the cockpit, the flight crew will receive additional emergency egress training on the 195-foot level of the Fixed Service Structure -- the level where the crew enters the cockpit and the slidewire baskets are located.

Later that day, the flight crew will return to Houston for final mission preparations. They will return to KSC a few days prior to launch.

Two major reviews are planned next week at KSC -- the Launch Readiness Review and the Flight Readiness Review, during which Shuttle managers will discuss the readiness of the vehicle elements for launch and resolve open issues.

Discovery is scheduled to be launched on the first post-Challenger mission from Launch Pad 39-B later this month. The primary objective of the four-day mission is to deploy the Tracking and Data Relay Satellite.

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NASA Fact Sheet

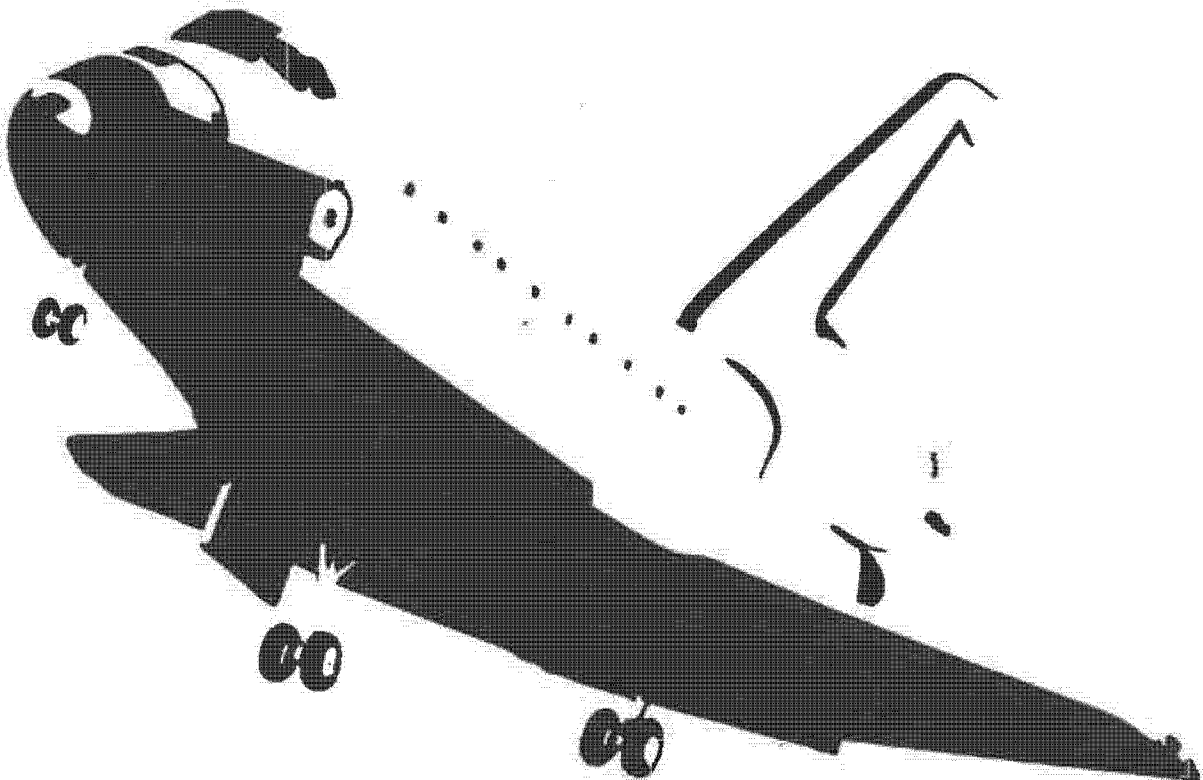
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KSC Release No. 68-88

NASA's Orbiter Fleet

Columbia, Discovery, Atlantis



NASA News

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For Release:
Immediate

Karl Kristofferson
Area Code 407/867-2468

KSC Release No. 66-88

NOTICE TO EDITORS/NEWS DIRECTORS

GROUNDBREAKING FOR MAJOR KSC FACILITY SET FOR FRIDAY, SEPT. 2

KENNEDY SPACE CENTER, Fla. -- A groundbreaking ceremony for KSC's planned six-story Launch Complex 39 Operations Support Building will be held at 9 a.m., Friday, Sept. 2.

Featured speakers for the ceremony include KSC Director Forrest S. McCartney, Jim Towles, KSC's director of Facilities Engineering, and Florida Congressman Bill Nelson. The ceremony will take place at the intersection of Launch Complex 39's Saturn Causeway and Contractor Road.

The Operations Support Building will provide permanent office space for over 1,700 NASA and contractor Space Shuttle workers now located in prefabricated modules, portable trailers and modified railroad boxcars. Besides offices, the 300,000-square-foot building will contain a barber shop, concession areas, an exercise facility, multi-media conference rooms, a technical documentation center, reproduction room and technical libraries.

The new facility will be located southwest of the Multi-Function Facility and connected to it by a covered walkway.

The building was designed by HWH Architects, Engineers and Planners of Orlando, and will be constructed by W&J Construction Corp. of Cocoa. It should be completed and ready for occupancy in June 1990. Cost, including outfitting, is \$20,695,000.

News media wishing to cover the ceremony should be at the KSC News Center by 8:30 a.m. Friday, Sept. 2, for transportation to the ceremony site. Media representatives with permanent credentials may drive directly to the News Center. Those who require access badges should contact the News Center at area code 407/867-2468 to make the necessary arrangements.

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NASA News

National Aeronautics and
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John F. Kennedy Space Center

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For Release:
Aug. 30, 1988

George Diller
Telephone: 407/867-2488

KSC Release No. 65-88

JOBEAR, INC. OF PALM BAY WINS CONTRACT TO BUILD PARKING LOT

Kennedy Space Center, Fla. -- NASA's John F. Kennedy Space Center has awarded a contract to Jobear, Inc. of Palm Bay, Fla., to construct a parking lot located adjacent to a recently completed facility on Launch Complex 39.

The new parking lot is associated with the Orbiter Processing Facility Annex addition, an area recently constructed for additional office space.

The value of the firm fixed price contract is \$202,555. The selection of Jobear, Inc. was made on a competitive basis, and the contract is one "set aside" for an award to a small business.

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NASA Facts

National Aeronautics and
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Space Shuttle Transoceanic Abort Landing (TAL) Sites

Planning for each Space Shuttle mission includes provisions for an unscheduled landing at contingency landing sites in the U.S. and overseas. Several unscheduled landing scenarios are possible, ranging from adverse weather conditions at the primary and secondary landing sites to mechanical problems during the ascent and mission phases that would require emergency return of the orbiter and its crew.

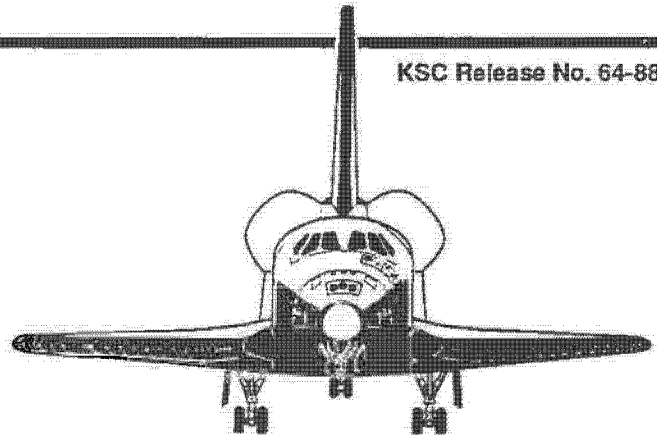
The Transoceanic Abort Landing (TAL) is one mode of unscheduled landing. The orbiter would have to make an unscheduled landing if one or more of its three main engines failed during ascent into orbit, or if a failure of a major orbiter system, such as the cooling or cabin pressurization systems, precluded satisfactory continuation of the mission.

The abort mode would depend on when in the ascent phase an abort became necessary. The TAL abort mode was developed to improve the options available if failure occurred after the last opportunity for a safe return to the launch site, but before the first opportunity to fly once around the Earth and return to a landing site. A TAL would be declared between roughly T+2:30 minutes and Main Engine Cutoff (MECO), about T+8 minutes, with the exact time depending on the payload and mission profile.

A TAL would be made at one of four designated sites, two in Africa and two in Spain: Ben Guerir Air Base, Morocco; Yundum International Airport, Banjul, The Gambia; Moron Air Base, Spain; and Zaragoza Air Base, Spain.

Although Banjul has many of the same features as the three other TAL sites, it is formally called an augmented emergency landing site.

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Each TAL site is covered by a separate international agreement, but all four are considered augmented because they have Shuttle-specific landing aids and NASA and Defense Department personnel available during a launch.

Space Shuttles are launched eastward over the Atlantic Ocean from KSC for insertion into equatorial orbits. In a TAL abort, the orbiter continues on a ballistic trajectory across the Atlantic to land at a predetermined runway. The four sites NASA has designated for TALs have been chosen in part because they are near the nominal ascent ground track of the orbiter, which would allow the most efficient use of main engine propellant.

Depending on mission requirements, an orbiter follows an orbital insertion inclination between 28.5 and 57 degrees, with the lower inclination preferred in most instances because it allows for a higher maximum payload weight. High or low inclination launches require different contingency landing sites.

BEN GUERIR AIR BASE, MOROCCO

The primary TAL site for a low inclination launch is the Ben Guerir Air Base in Morocco. Ben Guerir has also been designated a weather alternate TAL site for high inclination launches because of its geographic location and its landing support facilities. Ben Guerir replaced a TAL site at Dakar, Senegal, which NASA concluded was unsatisfactory due to runway deficiencies and geographic hazards.

Morocco is located along the northwest coast of Africa, between 27 degrees and 37 degrees north. It is shielded from

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Karl Kristofferson
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For Release:
Immediate

KSC Release No. 62-88

SORRENTO, FLORIDA COMPANY AWARDED KSC CONTRACT

KENNEDY SPACE CENTER, Fla. -- NASA's John F. Kennedy Space Center has awarded a \$369,100 contract to J. A. Croson Company of Sorrento, Fla. to install a potable water pipeline system between Launch Complex 39 on Merritt Island and Complex 41 on Cape Canaveral Air Force Station.

Launch Complex 39 is the nation's primary launch site for NASA's reusable Space Shuttle fleet. Launch Complex 41 was used by NASA to launch the Titan-Centaur vehicles carrying the Helios sun probes, the Viking/Mars orbiters and landers and the Voyager deep space probes to Jupiter, Saturn, Uranus and Neptune. Complex 41, owned and operated by the U.S. Air Force, is being modified to launch the Air Force Complementary Expendable Launch Vehicle.

J. A. Croson Company will provide the labor, equipment and materials to furnish and install the water pipeline system. The fixed priced contract, a set aside for small business, requires the contractor to complete all work within 180 days after notice to proceed.

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For Release:
August 12, 1988

George H. Diller
Kennedy Space Center
867-2468

Release No. 61-88

PRESS VIEWING OF TETHERED BALLOON DEPLOYMENT SCHEDULED TUESDAY

Local news media representatives are invited to be present on Tuesday, Aug. 16 to view the first operational deployment of an 85-foot-long, blimp-like tethered balloon, part of the 1988 summer Rocket Triggered Lightning Research Program.

NASA, in cooperation with NOAA, is deploying the balloon from which is suspended a 75-pound meteorological instrument pod, and an electric field mill which measures electric fields. NOAA is flying a pair of P-3 Orion weather reconnaissance "hurricane hunters" to compare data from the aircraft's on-board instrumentation with that suspended from the balloon.

The aircraft will fly over Mosquito Lagoon, parallel to the balloon's pod and associated field mill at three altitudes--150 feet, 1,500 feet, and 5,000 feet. The intent is to correlate the data from each set of instruments and assess reliability.

Also during this summer's research program an 8-foot-long, 60-pound instrumented lightning strike object will be suspended from the balloon to study lightning pre-attachment characteristics and the effect of a lightning strike in the air. This cylinder will also be available for viewing.

Program officials from NASA and NOAA will be available for questions.

A bus will depart the KSC Complex 39 News Center for the Rocket Triggered Lightning site at 6:15 a.m. on Tuesday, Aug. 16. Those news media representatives needing accreditation should make arrangements for badges by the close of business Monday, Aug. 15, by calling the NASA-KSC News Center at 867-2468.

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For Release:

Steve Dutczak
Tel. 407/867-4444

KSC Release No. 60-88

HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- Richard Hugh Roettger, a teacher at Ramey School in Ramey, PR, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Roettger was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 -August 12.

Co-sponsored by NASA, the National Science Teachers Association and the National Council of Teachers of Mathematics, the NEWMAST program offers science and math teachers of grades 7 - 12 an opportunity to enhance their knowledge of space science and technology through close interaction with NASA engineers and scientists.

NEWMAST, completing its fifth year, provides a forum to update teachers on various teaching methods and curriculums. Through an in depth study of NASA's educational programs and materials, NEWMAST teachers are able to acquire information on state-of-the-art research and development activities.

During the two week workshop, Roettger and the other teachers were briefed on KSC activities by Center Director Forrest McCartney and other top NASA officials. Scientists and engineers briefed the teachers as they visited Shuttle checkout and launch facilities and tours were provided through the adjacent Cape Canaveral Air Force Station from which NASA launched the Delta and Atlas Centaur unmanned vehicles.

On the second day of the program, the 1988 NEWMAST teachers were taken to the Canaveral National Seashore north of KSC and the Merritt Island Wildlife Refuge. Tromping through the swamps in sneakers, they viewed first hand how space technology and wildlife peacefully exist side-by-side.

This year's NEWMAST teachers also participated in other scheduled programs including building and launching experimental model rockets, visiting the Florida Solar Energy

Center, NASA's satellite tracking station and the Educators Resources Laboratory.

Specialized laboratories and operational areas used for current space technology applications were also opened to the teachers. Here they viewed electron microscopes, chemistry labs and the biomedical research developing for the space station.

Along with other VIP's the educators got up early to view the Flight Readiness Firing of Discovery.

Highlighting the end of their workshop was the visit to the various Shuttle related facilities. They toured the ships which bring back the solid rocket boosters, went inside the large clean rooms which house the preparation of satellites, toured the insides of the mobile launcher platform, the cavernous 53 story vehicle assembly building and the launch pad.

They not only saw the space shuttle Discovery on the launch pad, but also were briefed in the Orbiter Processing Facility where they viewed the first space flying shuttle Columbia.

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KENNEDY SPACE CENTER, FLA. -- Katherine A. Shelton, a teacher at Perry Middle School in Perry, GA, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Shelton was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 - August 12.

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HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- H. Keith Slagg, a teacher at West Rome High School in Rome, GA, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Slagg was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 - August 12.

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HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- Lori Livingston Hahn, a teacher at Brownsville Middle School in Pensacola, FL, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Hahn was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 -August 12.

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HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- Dennis Michael Holt, a teacher at Fairplay Middle School in Douglasville, GA, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Holt was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 -August 12.

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KSC Release No. 60-88

HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- Gayla Anderson Banks, a teacher at Bryan County High School in Pembroke, GA, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Banks was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 - August 12.

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HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- Mary Gene Fleming, a teacher at Washington High School in Pensacola, FL, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Fleming was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 - August 12.

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HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- Sandra Knudsen, a teacher at Robert E. Lee Middle in Orlando, FL, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Knudsen was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 - August 12.

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HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- Leamon C. Jourdan, a teacher at Carver Junior High School in Monroe, GA, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Jourdan was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 - August 12.

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HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- Ann Howie Hankinson, a teacher at Cardinal Mooney High School in Sarasota, FL, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Hankinson was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 - August 12.

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National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

For Release:

Steve Dutczak
Tel. 407/867-4444

KSC Release No.

HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- Carol Houck, a teacher at Seminole Middle School in Plantation, FL, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Houck was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 - August 12.

Co-sponsored by NASA, the National Science Teachers Association and the National Council of Teachers of Mathematics, the NEWMAST program offers science and math teachers of grades 7 - 12 an opportunity to enhance their knowledge of space science and technology through close interaction with NASA engineers and scientists.

NEWMAST, completing its fifth year, provides a forum to update teachers on various teaching methods and curriculums. Through an in depth study of NASA's educational programs and materials, NEWMAST teachers are able to acquire information on state-of-the-art research and development activities.

During the two week workshop, Houck and the other teachers were briefed on KSC activities by Center Director Forrest McCartney and other top NASA officials. Scientists and engineers briefed the teachers as they visited Shuttle checkout and launch facilities and tours were provided through the adjacent Cape Canaveral Air Force Station from which NASA launched the Delta and Atlas Centaur unmanned vehicles.

On the second day of the program, the 1988 NEWMAST teachers were taken to the Canaveral National Seashore north of KSC and the Merritt Island Wildlife Refuge. Tromping through the swamps in sneakers, they viewed first hand how space technology and wildlife peacefully exist side-by-side.

This year's NEWMAST teachers also participated in other scheduled programs including building and launching experimental model rockets, visiting the Florida Solar Energy

Center, NASA's satellite tracking station and the Educators Resources Laboratory.

Specialized laboratories and operational areas used for current space technology applications were also opened to the teachers. Here they viewed electron microscopes, chemistry labs and the biomedical research developing for the space station.

Along with other VIP's the educators got up early to view the Flight Readiness Firing of Discovery.

Highlighting the end of their workshop was the visit to the various Shuttle related facilities. They toured the ships which bring back the solid rocket boosters, went inside the large clean rooms which house the preparation of satellites, toured the insides of the mobile launcher platform, the cavernous 53 story vehicle assembly building and the launch pad.

They not only saw the space shuttle Discovery on the launch pad, but also were briefed in the Orbiter Processing Facility where they viewed the first space flying shuttle Columbia.

-End-

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KSC Release No. 60-88

HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- Max E. Wettstein, Jr., a teacher at Tavares High School in Tavares, FL, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Wettstein was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 - August 12.

Co-sponsored by NASA, the National Science Teachers Association and the National Council of Teachers of Mathematics, the NEWMAST program offers science and math teachers of grades 7 - 12 an opportunity to enhance their knowledge of space science and technology through close interaction with NASA engineers and scientists.

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HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- Marilyn S. Stalzer, a teacher at Antilles High School in Fort Buchanan, PR, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Stalzer was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 - August 12.

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HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- Wanda Jean Szymanski, a teacher at McLane Junior High School in Brandon, FL, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Szymanski was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 - August 12.

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HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- Mary Kaythren Wilde, a teacher at Booth Junior School in Peachtree City, GA, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Wilde was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 - August 12.

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HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- Carolyn O. Williams, a teacher at Langford Middle School in Augusta, GA, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Williams was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 - August 12.

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HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- Page R. Loyd, a teacher at Trickum Middle School in Lilburn, GA, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Loyd was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 - August 12.

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HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- Catherine C. Miller, a teacher at Cardinal Newman High School in West Palm Beach, FL, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Miller was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 -August 12.

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HOMETOWN TEACHER ATTENDS NASA WORKSHOP

KENNEDY SPACE CENTER, FLA. -- Sandy Amanda Moore, a teacher at Rutherford High School in Panama City, FL, recently completed a two week NASA Educational Workshop for Mathematics and Science Teachers (NEWMAST) at John F. Kennedy Space Center. Moore was among 20 specially selected master educators from Florida, Georgia and Puerto Rico attending the workshop which lasted from July 31 -August 12.

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NASA News

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Kennedy Space Center, Florida 32899
AC 407 867-2468

For Release:

Cynthia Buck
407/867-2468

August 16, 1988

KSC Release No. 60-89

HAMILTON ROOFING, INC. WINS KSC CONTRACT

KENNEDY SPACE CENTER, Fla. -- NASA's John F. Kennedy Space Center has awarded a \$128,980 contract to Hamilton Roofing, Inc. of Palm Bay, Fla. to replace the roof on its launch equipment shop building.

The firm will install a built-up roof system after removing the existing roof. Roof repair and replacement on KSC facilities is scheduled on an ongoing basis as a supplement to regular building maintenance and upkeep.

The fixed price contract is a set aside for a small, disadvantaged business. The work is to be completed in 120 days.

- end -

NASA News

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AC 407 867-2468

For Release:

Cynthia Buck
407/867-2468

August 12, 1988

KSC Release No. 60-88

PRECISION MECHANICAL INCORPORATED WINS KSC CONSTRUCTION CONTRACT

KENNEDY SPACE CENTER, Fla. -- NASA's John F. Kennedy Space Center has awarded a \$996,000 contract to Precision Mechanical Incorporated of Cocoa, Fla. for construction of an addition to the Communications Distribution and Switching Center and modifications to its heating, ventilation and air conditioning system.

The firm will replace an existing air conditioning unit and construct an addition to the communications center building which will accommodate new equipment.

The firm fixed-price contract is a set aside for a small business firm. The work is to be completed in 280 days.

-- end --

NASA News

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John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

For Release:

Jim Ball
Headquarters, Washington, D.C.
(Phone: 202/453-8604)

August 11, 1988

Pat Phillips
Kennedy Space Center, FL
(Phone: 407/867-2468)

RELEASE: 88-114

NASA AND SPACEHAB, INC., SIGN AGREEMENT FOR COMMERCIAL FLIGHTS

In a step to encourage the growth of a strong U.S. commercial space industry, the National Aeronautics and Space Administration has agreed to provide six, shared Space Shuttle flights for a privately developed and financed middeck augmentation module.

NASA and SPACEHAB, Inc. today signed a Space Systems Development Agreement (SSDA) that provides for flights of the company's Shuttle-based module, beginning in 1991.

SPACEHAB, Inc., based in Washington, D.C., has initiated final design and construction of a pressurized module that will augment the existing pressurized volume of the Space Shuttle middeck. The company is marketing access to the module and its support facilities on a commercial basis.

Under the terms of the agreement, SPACEHAB will pay \$28.2 million in FY 1988 dollars for standard services for each flight, with payment due 30 days following the landing of each mission. Spacehab does not use the full payload bay. The \$28.2 million charge, based on SPACEHAB's share of a mixed payload flight, will be escalated at the time of actual payment to allow for inflation. SPACEHAB also will pay interest on the deferred charges.

In addition, SPACEHAB will be charged in advance of each flight for optional services provided by NASA at the request of SPACEHAB.

-more-

NASA News

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Mitch Varnes
407-867-2363

For Release:
IMMEDIATE

KSC Release No. 59-88

SPACEPORT USA HAS BUSIEST MONTH IN HISTORY

KENNEDY SPACE CENTER, Fla. -- Monthly attendance at Spaceport USA, the Kennedy Space Center's visitors complex, reached an all-time high in July when more than 368,000 people visited America's Spaceport.

The July attendance figure is the highest single monthly number recorded at Spaceport USA since NASA initiated public tours of America's Spaceport in 1966. The previous monthly attendance record was set in July 1987 when about 302,000 people visited the space center.

Last month's record-breaking attendance marks the third consecutive July that an all-time monthly attendance record has been set at Spaceport USA. It is also the twenty-third time in the past twenty-five months that individual monthly attendance records have been shattered.

The busiest year in Spaceport USA's history was in 1987 when nearly 2.5 million people visited the space center. Cumulative attendance for 1988 now stands at about 1.75 million, which is about 8.5 percent higher than the same period in 1987 when approximately 1.6 million people visited Spaceport USA.

Spaceport USA is Florida's fourth most popular tourist attraction and draws more than 2.5 million visitors annually. It is operated by TW Recreational Services, Inc. under a concession agreement with NASA. A nominal fee is charged for bus tours and to view the IMAX film, "The Dream is Alive," but actual space flight hardware, audio-visual programs, NASA and contractor-sponsored exhibits and other space memorabilia are on display for visitors at no charge. Spaceport USA is open to the public every day of the year except Christmas.

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Aug. 1, 1988

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John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
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For Release:

Jim Ball
Headquarters, Washington, D.C.
(Phone: 202/453-8604)

August 1, 1988

Pat Phillips
Kennedy Space Center, Fla.
(Phone: 407/867-2468)

RELEASE: 88-108

NASA CO-SPONSORS SMALL AND MINORITY HIGH-TECH BUSINESS EXPO

Helping small and minority-owned businesses learn how to conduct business with the government is the topic of a seminar co-hosted by NASA on Aug. 21-24 in Orlando, Fla. Also sponsoring the high-tech seminar at the Hyatt Hotel are Florida Congressman Bill Nelson and the Small Business Administration.

The 3-day National High-Tech Expo will include workshops and opportunities to talk with counselors from successful contractors as well as federal, state and city governments. Topics include legislation, regulations and "how to" advice targeted specifically for the small or minority-owned business.

Representatives from NASA and the Florida Small Business Development Center will give current information high-tech finances, technology utilization transfer, how to write bid proposals and how to sell to NASA.

Speakers will include NASA Headquarters representatives Eugene Rosen, director of Office of Small and Small Disadvantaged Business Utilization; Henry J. Clarks, director of Technology Utilization Division, Office of Commercial Programs; Harry Johnson, director, small business Innovation research, Office of Commercial Programs.

Representing Kennedy Space Center will be Norman Perry, industry assistance officer and George Mosakowski, Tom Hammond and Jim Aliberti, Advanced Projects, Technology and Commercialization Office.

- more -

NASA News

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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899

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Pat Phillips
(407) 867-2468

For Release:

July 31, 1988

KSC Release No. 58-88

LAVANDERA ELECTRIC CO. WINS KSC CABLING CONTRACT

KENNEDY SPACE CENTER, Fla. -- NASA's John F. Kennedy Space Center has awarded a \$191,374 contract to Lavandera Electric Company of Tampa, Fla. for installation of a new underground power line.

The firm will provide the labor, equipment, and materials for replacing approximately 13,800 feet of aerial power line with 13.8KV underground cable along State Road 402 on KSC.

The fixed-price contract is a set-aside for small and disadvantaged business. The work is to be completed in 180 days.

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NASA News

National Aeronautics and
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John F. Kennedy Space Center
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For Release:

Dick Young
Area Code 407/867-2468

Immediate

KSC Release No. 57 - 88

NEWS CONFERENCES SCHEDULED FOR STS-26 FLIGHT READINESS FIRING

KENNEDY SPACE CENTER, Fla. - The Flight Readiness Firing (FRF) of the Space Shuttle Orbiter Discovery's three main engines in preparation for the launch of the STS-26 mission will be preceded and followed by news conferences.

The FRF is now tentatively scheduled for no earlier than 7:30 a.m. on Thursday, Aug. 4, with the exact date contingent upon the results of a review of the data from the Wet Countdown Demonstration Test over this past weekend.

The pre-FRF news conference will be held at the KSC News Center at 2 p.m. EDT on the day prior to the firing. Journalists are responsible for tracking with the News Center the exact date and time of the FRF. Participants will be:

Robert B. Sieck, launch director, Kennedy Space Center
William R. Marshall, manager, Shuttle Projects, Marshall
Space Flight Center
Maj. Norman E. Buss, USAF, officer-in-charge, Cape Canaveral
Forecast Facility

The post-FRF news conference will be held at the KSC News Center to discuss test results approximately four hours following the engine firing. The participants will include:

Robert L. Crippen (Captain - USN), deputy director, NSTS
Operations and chairman of the Mission Management Team
Thomas E. Utsman, director, Shuttle Management and
Operations and deputy director, Kennedy Space Center

Both news conferences will be carried on NASA Select Television (Satcom F2R, transponder 13, 72 degrees west longitude) with two-way question and answer capability.

They may also be monitored on KSC's V-2 Audio Circuit, available by calling Area Code 407/867-1220, 1240 or 1260.

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Aug. 1, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

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Kennedy Space Center, Fla.
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For Release:
July 28, 1988

KSC Release No. 56-88

FLIGHT READINESS FIRING OF STS-26 SHUTTLE VEHICLE SET FOR AUG. 1

KENNEDY SPACE CENTER, Fla. -- Launch Pad 39-B will be the stage for Discovery's Wet Countdown Demonstration Test and Flight Readiness Firing - two important events toward the next Space Shuttle launch. The eastern sky will brighten when Discovery's main engines are fired for approximately 22 seconds - scheduled for no earlier than 7:30 a.m. Monday, August 1.

Test objectives include evaluating the performance of various components of the shuttle, external tank, solid rocket boosters as well as the launch facilities and support equipment. In addition to verifying Shuttle system integrity and main propulsion system performance, the test serves to verify propellant delivery systems.

Some of the specific goals include: verifying the integrity and performance of the shuttle main propulsion system (orbiter, main engines and the external tank), verifying the capability of the combined launch facility and new or modified shuttle systems to provide propellants at the specified conditions, perform external tank tanking test and ice formation evaluation, determine the external tank's chill effect on the solid rocket motor cases, assess the performance of the SRM field joint heaters during tanking and monitor field joint heater temperatures, assess the stiffness of combined SRM cases, aft skirts and external tank attach ring and calculate loads on the eight SRB hold down bolts.

In addition all members of the launch team designated to be in the Firing Room on launch day are required to participate in the Flight Readiness Firing activities. Members of the Mission Management Team will be at their consoles in the Operations Support Room in Firing Room 1 for both tests. Members of the Office of Space Flight Management Council including RADM. Richard Truly and NASA center directors, and NASA Administrator James Fletcher will be in the Operations Management Room in Firing Room 1 for the FRF.

During the hiatus in launching over the past two and a half years many modifications have been made to the Space Shuttle's systems and launch facilities. Last year, officials decided to incorporate the two tests into Discovery's processing flow to provide engineering data to evaluate the various systems modifications, and to provide an opportunity to exercise the launch teams and revised procedures.

Over 700 pieces of instrumentation installed on the shuttle vehicle and mobile launcher platform will provide engineers with important data to be used during the test and for analysis after the test.

For both tests, the countdown activities will parallel those of a standard shuttle launch countdown. The flight crew will not board Discovery during the tests and software inhibits (patches) will prevent the ignition of the two solid rocket boosters.

WET COUNTDOWN DEMONSTRATION TEST (WCDDT)

This is the second Wet Countdown Demonstration Test (WCDDT) to be conducted with the shuttle vehicle. The other time was prior to STS-1 flight in 1981. The test began at the T-43 hour mark at 11:33 p.m. Sunday, July 24 and is scheduled to culminate at 5:30 a.m. Friday, July 29 at the T-10 second point.

Discovery's external tank will be filled with its flight load of a half-million gallons of cryogenic propellants at the T-6 hour mark in the countdown.

After the tank is full, the ice/debris inspection team will proceed to Launch Pad 39-B. They will inspect the external tank and assess the integrity of the thermal protective system covering the tank while its loaded with cryogenic propellants. In addition, they will characterize ice or frost formations on the tank. The team will also look for possible debris on the launch platform or Fixed Service Structure that could blow around during launch and cause possible damage.

During these tests, the ice team will baseline a new infrared shuttle thermal imaging system consisting of a portable unit and two permanent units equipped with 10 power telescopes - one on the top of the Rotating Service Structure and one at a nearby camera site - to measure vehicle surface temperatures for the duration of tanking, testing and drainback. The fixed devices will be controlled remotely from consoles in Firing Room 2.

At the T-1 hour, 10 minute mark, the countdown will enter a built-in hold for three hours and 45 minutes. During that time, several tanking tests will be conducted on both the liquid hydrogen and liquid oxygen systems. Important engineering data will be gathered during these tests.

The countdown will proceed down to the T-10 second point when a cutoff will be given. Inside the T-10 second mark is when the shuttle's main engines are programmed to start. But for the "wet" tanking test, the main engines will not be started and the solid rocket boosters will not be ignited.

The SRB hydraulic power units, which are used to steer the rockets, will be started just prior to the cutoff at T-10 seconds and a gimbal profile of the SRB nozzles will be conducted prior to their shutdown. In addition, the orbiter's auxiliary power units will be run to high speed and shut down.

About 10 minutes after the cutoff, the external tank slowly will be emptied of its liquid hydrogen and liquid oxygen as scrub/turn around activities begin in preparation for the FRF. The cryogenic propellants will be returned to their storage tanks at the pad and will be reused for the FRF and launch.

FLIGHT READINESS FIRING (FRF)

Activities for this test, one of the most critical and hazardous ground tests performed at KSC, will mirror most of the operations in a 72-hour scrub/turn around launch attempt and shuttle launch countdown.

Some of the "scrub/turn around" activities include draining the external tank, removing special instrumentation from the external tank inter tank area and inspecting the SRB hydraulic power units for any hydrazine that may have leaked during the test. The RSS will be moved back in place around the orbiter.

At the T-11 hour mark, the countdown will enter a planned built-in hold for four hours, 10 minutes. During this time the water tank for the sound suppression water tower will be filled to the top. The tower holds approximately 300,000 gallons of water and all of it will be dumped during the FRF. Another event that occurs at this time are preparations to roll the Rotation Service Structure (RSS) back to the park position away from the vehicle.

When the countdown resumes at the T-11 hour mark, at about 6:10 p.m. Sunday, July 31, the RSS will be rotated away from the vehicle and parked in the launch configuration.

Tanking begins with loading liquid hydrogen at about the T-6 hour mark. Thirty minutes later workers will start loading liquid oxygen into the tank. Filling of the external tank will begin slowly and then build to "fast fill" before going into the "stable replenish" mode where the tank is constantly being topped off as the cryogenic propellants boil away. The stable replenish mode will continue until the tank is pressurized just minutes before T-0.

After the tank is full, the ice/debris team will make another trip to the launch pad for a two-hour inspection. Afterwards they will report their findings to management. For the FRF, the same infrared scan system will be augmented with three additional units which, in addition to measuring vehicle surface temperatures, will characterize the thermal environment of SSME firing and shutdown. These infrared instruments will be located north of the flame trench, and at two camera sites at the perimeter of the pad to provide total coverage around the vehicle.

At the T minus three hour mark, the countdown will enter the standard two-hour built-in hold. There are two 10-minute built-in holds at the T-20 and T-9 minute points.

At T-6.6 seconds the ground launch sequencer will issue the main engine start command. There will be a standard staggered engine start sequence - main engine 3, 2, and 1 will be started 120 milliseconds apart in that sequence.

Cutoff of the main engines will be initiated by an induced Redundant Set Launch Sequencer Abort.

The orbiter's onboard general purpose computers will detect a failure of the main engines to have achieved a preset thrust level of 150 percent and will command shutdown of the No. 1 engine about 19.4 seconds after the start command was given. Cutoff of the No. 2 engine will be given at 20.6 seconds and the No. 3 engine cutoff will occur at about 22 seconds.

Two of Discovery's engines have never flown before - engine 2022 in the No. 2 position and engine 2028 in the No. 3 position. Engine 2019, in the No. 1 position, has flown three times and has been through an FRF. All engines went through acceptance testing at the Stennis Space Center, Bay St. Louis, Miss., prior to being shipped to KSC. All three engines arrived and were installed in January 1988.

After engine shutdown and initial safing, propellant drainback and other post-FRF operations will begin to reconfigure the ship and launch preparations will resume.

PREVIOUS STS FLIGHT READINESS FIRINGS

KSC's launch processing team has conducted five previous FRFs. Each was conducted from Launch Pad 39-A to qualify the Columbia, Challenger, Discovery and Atlantis for their maiden voyages into space.

Two test firings were required on Challenger because of an elusive hydrogen leak detected during the initial FRF. There are no requirements to conduct an FRF before STS-27 or STS-28, Atlantis' and Columbia's first post-Challenger flights.

SPACE SHUTTLE ORBITER	FRF DATE	FIRST LAUNCH
Columbia (OV 102)	February 20, 1981	April 12, 1981
Challenger (OV 099)	December 18, 1982 January 25, 1983	April 4, 1983
Discovery (OV 103)	June 2, 1984	August 30, 1984
Atlantis (OV 104)	September 12, 1985	October 3, 1985

COUNTDOWN SEQUENCE HIGHLIGHTS FOR FRF

Time	Function
T-62 hours	Countdown clock is reset from the WCDDT to exercise the 72-hour scrub/turnaround activities that prepare for the FRF.
T-38 hours	Rotate the Rotating Service Structure (RSS) to the mate position (around the orbiter).
T-27 hours	Clear pad to begin loading liquid oxygen and liquid hydrogen reactants into fuel cell storage tanks (PRSD load)
<hr/>	
T-11 hours	Enter 4 hour, 10 minute built-in hold
<hr/>	
T-11 hours	Retract RSS to park position away from orbiter in the launch configuration.
T-9 hours	Begin orbiter fuel cell activation
T-8 hours	Clear personnel from the blast danger area and activate the OASIS payload
T-6 hours	Begin chilldown of transfer lines for loading liquid hydrogen and liquid oxygen into the external tank.
T-5 hours, 50 minutes	Begin loading liquid hydrogen into the tank
T-5 hours, 20 minutes	Begin loading liquid oxygen into the tank
T-3 hours	Topping of the oxygen and hydrogen is complete and the ice/debris inspection team proceeds to pad
<hr/>	
T-3 hours	Enter a 2 hour built-in hold
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T-3 hours	Ice/debris team returns from pad
T-1 hour	Preflight alignment of the inertial measurement units is begun

T-20 minutes	Countdown enters 10 minute built-in hold
	Inertial measurement unit alignment is complete
T-20 minutes	Onboard computers transition to terminal countdown configuration
T-9 minutes	Countdown enters 10 minute built-in hold
T-9 minutes	Start the ground launch sequencer and terminal countdown
T-7 minutes, 30 sec.	Start Orbiter Access Arm retraction
T-5 minutes	Start auxiliary power units to provide orbiter hydraulic power
T-3 minutes, 25 sec.	Main propulsion system gimbal profile
T-2 minutes, 55 sec.	Start liquid oxygen pre-pressurization
T-1 minutes, 57 sec.	Terminate LH2 replenish and start pressurization
T-31 seconds	Go for auto sequence start
T-21 seconds	Hydraulic power unit start and SRB gimbal profile
T-6.6 seconds	Go for main engine start - SSME No. 3 starts
T-6.4 seconds	SSME No. 2 starts
T-6.3 seconds	SSME No. 1 starts
T-0	Engines at 100 percent thrust
T+12.8 seconds	SSME No. 1 shut down
T+13.9 seconds	SSME No. 2 shut down
T+15.2 seconds	SSME No. 3 shut down

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George H. Diller
Kennedy Space Center
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ROCKET TRIGGERED LIGHTNING RESEARCH PROGRAM ENTERS SIXTH SUMMER

KENNEDY SPACE CENTER, Fla. - The NASA-sponsored Rocket Triggered Lightning Program (RTLTP) has entered its sixth summer season at the Kennedy Space Center. Triggered lightning launch activity has resumed from the pads on the shore of Merritt Island's Mosquito Lagoon, approximately 8 miles north of the Vehicle Assembly Building.

A space age, high-tech version of Ben Franklin's key on a kite string, the program entails launching three-foot-tall solid fueled rockets into a thunderstorm to an altitude of 3,000 feet, trailing a wire to ground. Data are collected by lightning investigators at the launch control site and at near-by field locations. There is capability to launch up to a dozen rockets from each pad in a single thunderstorm, depending on the storm's lightning potential.

The principal investigators began installing instrumentation at KSC on July 15 for the summer program, which lasts through August. Approximately 40 investigators are participating in the program this year from 15 institutions including the federal government, the private sector, leading universities, and international organizations.

The lightning research program grew out of NASA's desire to improve lightning protection systems for KSC facilities and space launch vehicles. This objective continues with an additional goal of improving lightning forecasting. Because the nature of this research has a broad range of applications, and because the result of a lightning strike is everyone's problem, NASA has encouraged others to participate.

Eventual civil applications of the Rocket Triggered Lightning Program may include earlier and more precise lightning warnings, lightning avoidance by aircraft, and the development of lightning protection systems that would preclude power outages and loss of communications.

A new element has been added for the 1988 season. A tethered balloon 1500 feet in the air has suspended from it an instrumented lightning strike object at an altitude of 500 feet. The ultimate goal is to develop a set of data that will delineate the characteristics of the lightning strike potential in three environments; over land, over water, and in the air.

This year NASA continues to collect data for evaluating the effectiveness of lightning protection systems used for facilities at the Kennedy Space Center, and to increase understanding of the lightning initiation process. This will improve early detection of thunderstorm development and lightning strikes. It will also enhance the quality and reliability of launch criteria for lightning avoidance by understanding how rockets or other aerospace vehicles can trigger lightning.

In addition, a data base continues to be established to better understand the climatology of the Cape Canaveral area so that more precise weather forecasts can be developed.

Along with NASA, the leading institutions participating this year are NOAA, the U.S. Air Force Geophysical Laboratory, the Naval Research Laboratory, Boeing Aircraft, Dayton Granger Corporation, the Electric Power Research Institute, Florida Power Corporation, the University of Florida, the University of Arizona, the State University of New York at Albany, Embry Riddle Aeronautical University, the University of Mississippi, the New Mexico Institute of Mining Technology, and the University of San Juan in Puerto Rico.

Also, three government-sponsored research groups from France are again participating which include CENG (Centre Etudes Nucleaires de Grenoble), ONERA (Office National d'Etudes et de Recherches Aerospatiales), and CNET (Centre National d'Etudes Telecommunications). The French have had an ongoing involvement in the KSC program and along with the United States pioneered the first rocket triggered lightning research.

The participants collaborating in the program change from year to year because the objective of each organization differs, predicated on distinct areas of direct application.

The field mill system at KSC, used to detect and locate lightning, is providing data as part of most experiments in the program this summer. As in the past, field mills are being used to study the electric field environment in situations where lightning is being triggered. This will provide a more complete picture of weather conditions conducive to triggering lightning, and will provide data which can assist in developing guidelines that can extend to larger launch vehicles.

For a second year, in addition to the traditional land pad, a raft-like launching pad is being used. The 12-by-12 foot platform used to launch rockets from about 100 feet offshore, is connected with the launch control and instrumentation facility by pneumatics and fiber-optic instrumentation. A lightning strike with a more "pure" electrical signature is generated from a launch over water. This is more characteristic of natural lightning since it is not subject to electrical current distortions from the ground or pad-associated ground support equipment.

The tethered balloon included in this year's research resembles a blimp, is 85 feet long, 25 feet in diameter, and holds 20,000 cubic feet of helium. Suspended from the balloon is the instrumented lightning strike object. This cylinder is approximately 8 feet long, 2 feet in diameter, and weighs about 60 pounds.

Also suspended from the balloon is an airborne electric field mill. This is being provided by the University of Mississippi, with research assistance from the New Mexico Institute of Mining Technology.

The objectives using the balloon are being closely coordinated with the French research team. Four lightning science objectives are under study.

- 1.) Determine the pre-attachment of electric fields to the suspended lightning strike object which would initiate a lightning strike. Eventually, by detecting and understanding the process by which a cloud develops a charge, it is anticipated that forecasters can be provided with advance notice as to where and when lightning will occur.

- 2.) Attempt to document with photography and other data collection methods the lightning initiation process of an upward-going positively charged "streamer" and downward-going negatively charged "step leader" from a free-flying object, believed generated by high electric fields. This process exists in nature between ground and cloud.

- 3.) Improve understanding of how far lightning will travel from its point of origin to a distant object during a strike, called the "lightning striking distance." In addition it will hopefully be learned why lightning also chooses to strike some particular secondary object instead of some other.

- 4.) Study the relationship between a ground-based field mill and an airborne field mill which is above the area of space charge, or interference created from the ground environment. This can ultimately improve the accuracy of launch criteria.

NOAA is flying a pair of P-3 Orion weather reconnaissance aircraft with standard meteorological observation instruments and an airborne field mill to compare data with a similarly instrumented pod and a field mill which are suspended from the balloon. The intent is to correlate the data from each set of instruments and assess reliability.

It is possible that lightning may not strike the instrumented canister suspended from the balloon. If this is found to be true, then the rockets will be attached to the canister for launch.

Using the tethered balloon probably comes the closest to recreating Ben Franklin's original experiment using "high-tech" methods. Hopefully it will lead to discoveries as significant as Franklin's original studies.

The private sector participants each have an objective for the summer program with a specific application in mind and have provided lightning strike objects which are mounted on the land launching pad.

Boeing Aircraft has installed a fiberglass radome and associated radar dish taken from the nose of a jet aircraft to study the effectiveness of metal lightning diverter strips attached to the radome. This essentially creates an airborne attach point on which to focus a lightning strike which then provides a preferred path through the skin of the aircraft.

Boeing, together with the Dayton Granger Corporation which manufactures the diverter strips, will attempt to learn what type, how many, and where these metal strips should be placed on the radome to establish effective protection. However, the desire is to use as few as possible so that the efficiency of the radar antenna beneath it is not impaired.

Again this year, the Electric Power Research Institute and Florida Power Corporation are testing the effectiveness of lightning current recorders. These recorders measure the lightning current wave form with its associated effect throughout the power distribution system.

Based on data obtained during last summer's program, changes have already been implemented into recorders associated with FPC's power grid. This measures more accurately what happens to the power line system when lightning occurs.

In addition, the effectiveness of protective devices for Florida Power will be assessed under actual conditions on a dedicated, normally powered line subject to the lightning environment.

The ongoing participation of three major university institutions in the program will enable them to move closer to their research objectives, expanding upon the knowledge gained in previous years.

The State University of New York at Albany is taking high speed video and film photography of lightning flashes. From this imagery they will study the lightning stroke process, the velocity of the stroke, and the stroke's fractal geometry. This data will be of benefit to other lightning researchers.

The University of Arizona has three objectives during the 1988 summer season. They are studying the optical properties of lightning with the specific objective of improving satellite airborne sensors which are being developed by the NASA Marshall Space Flight Center for installation on future weather satellites.

The optical equipment can distinguish where the lightning strikes, and by photographic analysis quantify the type and magnitude of the strike. Approximately 1,000,000 watts of light per meter of lightning channel has been measured with an internal temperature of 60,000 degrees. This optical system also provides accurate data on which to judge the accuracy and reliability of other lightning instrumentation. Further, this could assist NASA in the field of planetary meteorology in understanding the lightning process on other planets.

The University of Arizona is also measuring and analyzing the production of ozone from lightning. It is postulated that ozone generation by lightning may replenish the Earth's natural supply, possibly being depleted by aerosols.

Again this year University of Arizona researchers are taping the sound of thunder at various distances from the rocket triggered lightning launch site, hoping to learn how thunder is produced, and how the sound characteristics of thunder change with distance from the lightning.

The University of Florida is continuing to develop sensors which remotely sense the electrical atmospheric environment to detect the early lightning initiation processes. This will improve the ability to measure and forecast a three-dimensional electrical environment up to 25 miles distant from Kennedy Space Center. Antennas for this system are under installation at KSC. Associated instruments will be installed later in the season.

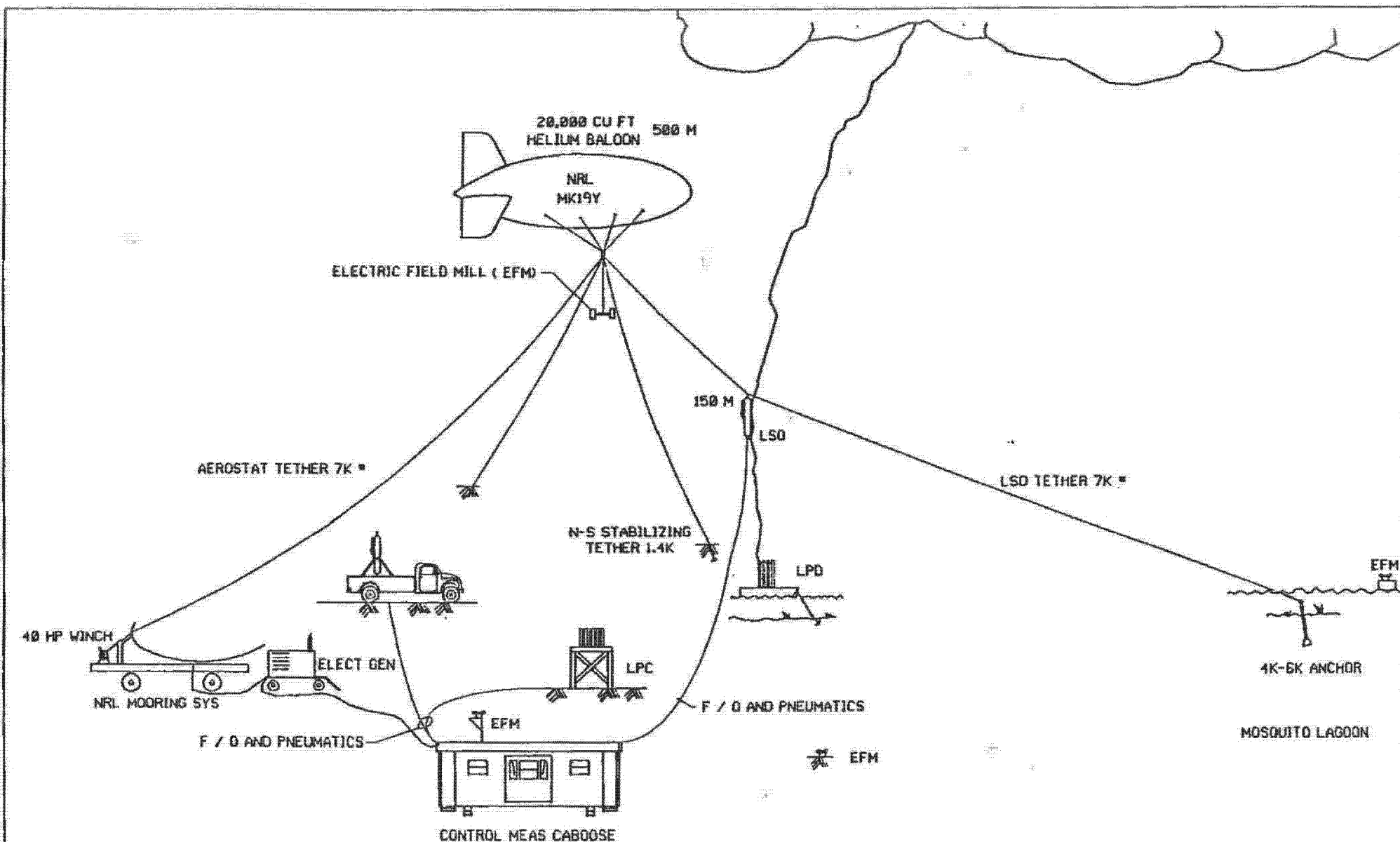
The goal is to gather information which may help determine the pre-initiation process of lightning before it actually occurs. From this may come a more cost-effective way to forecast thunderstorm development and the lightning initiation process--parameters that can be included in KSC's launch commit criteria.

Another aspect of the University of Arizona research has a similar objective but takes an alternative approach, using a sensor buried in the earth. This sensor detects a ground current which is correlated with the measured negative potential between ground and cloud. The purpose is to locate the generating source of currents in the cloud that are associated with specific cloud development.

Potentially, either system could provide advance notice of the occurrence of lightning. Also, aircraft may be able to use such instrumentation to map and avoid charged clouds.

The Advanced Program Development Office of NASA Headquarters and NASA-KSC are supporting the Rocket Triggered Lightning Program by attempting to transfer technology generated by the program to private industry, other federal agencies, universities, and the general public. In addition NASA is promoting the attributes of the Cape Canaveral area for lightning research, hoping to demonstrate the feasibility of establishing a permanent atmospheric science research laboratory at the Kennedy Space Center, attracting other private sector participants.

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KSC / NRL AFWAL / ONERA - CENG
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BUILDING A BETTER WAY TO SPACE--WITH PAPER

KENNEDY SPACE CENTER, Fla. -- Behind every thundering launch of a Space Shuttle lies a quieter path to space that requires grueling hours, precision work, and dedication to a project that few will ever see and applaud.

We're talking about paperwork.

Right now, someone, somewhere at Kennedy Space Center is reviewing an Operation and Maintenance Instruction, or OMI as it's called -- one of the pieces of bread-and-butter paperwork that document the way Space Shuttles--and their related ground equipment--are prepared for flight.

Since the Challenger disaster, hundreds of civil service and contractor employees have been reading and revising thousands of pages contained in 1,648 OMIs and related documents. Specifically, they are incorporating changes made as the result of the presidential investigation into the 51-L accident--changes which have altered Kennedy Space Center processing requirements and the procedures which implement them. Thousands of work tasks must be accomplished to meet some 12,000 unique requirements, and the reviewers have to make sure every task is documented in an OMI.

For STS-26, the teams are reviewing 534 flight OMIs, averaging 200 pages each. They have completed over 490--meaning the documents have been reviewed, processed and performed on flight or ground hardware at least once. Of 998 job cards, which are like mini-OMIs that cover single tasks and average about ten pages each, all are completed. And 97 out of 118 ground support equipment OMIs have been addressed, according to Mark Barnes of Lockheed Space Operations Co., supervisor of the Operations and Maintenance Documentation staff.

-more-

"We're pretty much done," agrees Carey McCleskey of KSC's Vehicle Engineering directorate, a NASA participant in the ascent thrust vector control system review.

Most of the reviews still to be done pertain to launch pad work and post-launch activities such as retrieval of the solid rocket boosters, points out Larry Ellis, chief of Kennedy Space Center's shuttle project engineering office. If it's a pre-Challenger OMI, it's supposed to be ready 10 days before use; a new OMI must be ready at least thirty days ahead of time to give the user time to become familiar with it. The only way to miss a deadline is through a waiver, and "I don't anticipate any waivers between now and launch," Ellis says.

This isn't the first time OMIs have been reviewed, but the new requirements have made this review an especially tough job, says McCleskey.

"It's very, very tedious and repetitive," he says.

Reviewing an OMI is a two-step affair, at least in theory. As McCleskey describes the process, he and other NASA and contractor experts in systems, quality, engineering, operations and safety take a computer printout of each OMI and mark it up or "redline" it. The changes are formatted and keyed in by the Operations and Maintenance Documentation (OMD) staff, and a "flimsy" is generated for tabletop review.

"You go through it line by line, and you go back with more red lines until you get to the point where everybody feels good about it," says McCleskey.

All review participants must meet for a final signoff review, and even this can lead to yet another meeting to discuss yet more changes. "It can take a while to get the final OMI out on the street," McCleskey observes.

An OMI can cover anything from a single Shuttle system, such as an auxiliary power unit, to the many inter-related systems needed to carry out the flight readiness firing (FRF) scheduled for later this month.

The OMI for the FRF is six volumes long and contains several thousand pages. The signatures required to pass just one volume fill six pages and include the names of more than 100 government and contractor personnel. While fewer than 20 people may work on a single system review, several hundred people contributed to the FRF OMI review, says Ellis.

Despite the enormity of the task, reviewing an OMI isn't a full-time job. Each participant must sandwich the reviews between his or her regular duties. In addition, the reviews also must be conducted "any place we can find," according to Ellis--although a major review involving a large number of people is usually conducted in KSC's Launch Control Center.

The memories of an OMI review usually aren't fond ones. "It was somewhat painful," McCleskey recalls. Ellis admires the dedication it takes to juggle a work schedule with an OMI review. "It goes pretty good," he maintains. The participants "come in and do their job."

Because of STS 51-L accident, NASA has increased the number of people who must participate in an OMI review. The space agency now includes the design centers--Johnson and Marshall, and their contractor counterparts--Morton Thiokol, Rockwell, Rocketdyne, Martin Marietta and USBI. Ellis estimates the OMI workload has increased as much as 75 percent because of the increased participation and requirements.

Bringing in the designers has yielded some real benefits, McCleskey believes. "We get to meet face-to-face with people whom, before, we had only talked to on the phone," he says. "We get to know them a little better, maybe even go out and have a cup of coffee. From that respect, it is positive."

An easily overlooked burden is borne by the documentation staff who must come up with a coherent document that accurately reflects the proposed changes. "We try to make it a simple process," says OMD chief Barnes. A writer must format and interpret the hand-written notations on the red-lined printout, then give the material to a data operations staffer for input.

Tina Both, a Lockheed OMD technical writer, notes that the engineers are required to be on call to answer any questions that may arise. "They're very helpful," says Both. She's worked extensively on the orbiter tile OMIs, and counts 24--a heavy load--that she's tracking now. "There's quite a bit of pressure," she says, especially since deadlines can change. Both estimates that a 400- to 500-page red-lined OMI is a week's worth of work.

Both, a space program buff who loves her job, agrees that working with OMIs is not easy. "We don't have a lot of control, yet we're responsible."

Producing the flimsies just for tabletop review is a gargantuan job, Barnes says. If it's a major OMI, several hundred copies may be needed. Gene Thurston, a NASA technical integration engineer with KSC's Vehicle Engineering directorate, estimates the flimsies account for nearly a third of the OMD's workload. He's working on a pilot project aimed at automating some of the OMI review process. The project, begun this spring, should save both money and time, Thurston says.

NASA is hoping for a 20 percent reduction in the 101 or so days it takes to carry a major OMI review from start to finish. Improvements being studied include having the engineers make their red-line changes into a personal computer rather than by hand to a printout. Performing the preliminary review process on screen instead of on paper would cut back the documentation staff's workload and could even eliminate the need for the dreaded flimsies.

Several OMIs have been run through the pathfinder project, Thurston says. Use of off-the-shelf equipment is being stressed, but a large, 67-inch screen was purchased for use during final signoff review. The idea is that during final signoff, participants can look at the OMI displayed on screen with the proposed changes and decide then and there what stays and what goes, rather than having to schedule yet another meeting. Teleconferencing the reviews is also being studied. "It's a more efficient way of processing and reviewing OMIs," Thurston notes.

The system for reviewing and developing OMIs may be upgraded and automated, but the need for them and the importance of reviewing them will not change. They provide the "traceability and trackability" crucial to verifying that Space Transportation System requirements are being met and implemented, Ellis says.

"We've always done it and we'll always continue to do it," he observes.

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NOTICE TO EDITORS/NEWS DIRECTORS:

PRESS ACTIVITIES ANNOUNCED FOR DISCOVERY FLIGHT READINESS FIRING

KENNEDY SPACE CENTER, Fla. - The Kennedy Space Center's News Center will be open for coverage of the Flight Readiness Firing of the Space Shuttle Orbiter Discovery's three main engines two days prior to the event.

The FRF will be conducted as soon as practicable - probably this weekend. A target date will be set after the conclusion of the wet countdown test which began on the night of Sunday, July 24. The FRF will be scheduled for 7:30 a.m. EDT on the date ultimately selected.

The hours of operation at the News Center for FRF activities are as follows:

FRF minus 2 days:	8 a.m. - 5 p.m.
FRF minus 1 day:	8 a.m. - Midnight
FRF Day:	4 a.m. - 7 p.m.

Badges for the FRF will be issued to news media representatives without permanent credentials at the Pass Identification Building at KSC's Gate 2 on Florida Route 3 on the south end of the center. Those who have not previously arranged for badging by calling Area Code 407/867-2468 must have letters of assignment from recognized news-gathering organizations and provide photographic identification. Hours of operation will be:

FRF minus 2 days:	8 a.m. - 4:30 p.m.
FRF minus 1 day:	10 a.m. - 7 p.m.
FRF Day:	4 a.m. - noon

Properly badged media representatives may drive unescorted to the Complex 39 Press Site and the Complex 39 cafeteria via Gates 2 and 2C on Florida Route 3 and through Gate 3 on the western end of the NASA Causeway on State Road 405. Stops enroute are not authorized.

- more -

- 2 -

News Conferences

News conferences will be held at:

Pre-test: FRF minus 1 day - 11 a.m. EDT

Post-test: FRF plus 4 hours

Both the pre-test and post-test briefings as well as the Flight Readiness Firing will be carried on NASA Select Television, Satcom F-2R, Transponder 13.

On FRF day, NASA Select TV coverage and Public Affairs commentary will begin at 6 a.m. with live coverage to continue through the 22-second test firing. Several taped replays of footage from remote cameras will be made during the first hour after firing. NASA Select will remain "up" through the post-test briefing with the sequence of events to be indicated by a font.

All briefings and the Public Affairs commentary accompanying the FRF will be carried on the V-2 circuit, accessible by dialing Area Code 407/867-1220/1240 or 1260. The status of planned events is also available by dialing the News Center's automatic information line at Area Code 407/867-2525.

For additional information, you may contact the KSC News Center at Area Code 407/867-2468.

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July 25, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

For Release:

Jim Cast
Headquarters, Washington, D.C.
(Phone: 202/453-8536)

July 15, 1988
10 a.m. EDT

George Diller
Kennedy Space Center, Fla.
(Phone: 407/867-2468)

Captain Marty Hauser
U.S. Air Force, Washington, D.C.
(Phone: 202/695-5766)

RELEASE: 88-99

DELTA LAUNCH COMPLEX TRANSFERRED TO AIR FORCE

After 143 Florida launches of the Delta expendable launch vehicle, NASA has officially transferred custody of Launch Complex 17 and East Coast Delta launch operations to the U.S. Air Force.

Under an agreement signed by NASA Administrator Dr. James C. Fletcher and Air Force Secretary Edward C. Aldridge, Jr., formal handover of the two-pad complex, located at Cape Canaveral Air Force Station, Fla., was effective July 1. Accountability of Delta production tooling and mission checkout equipment also was transferred under the agreement.

The first successful NASA Delta launch from Complex 17 took place 28-years ago in August 1960. Its payload, Echo-I, was a 100-foot-diameter, reflective communications balloon which became a familiar orbital sight to a world-wide audience of nighttime sky watchers.

NASA's final Delta launch from Complex 17 occurred earlier this year, on February 8, when a Strategic Defense Initiative Organization payload was successfully placed into orbit.

Under Air Force stewardship, Complex 17 will continue to be used to launch Delta medium class vehicles. The Air Force has procured 20 new Delta IIs for DOD payloads. The first launch is scheduled for later this year.

-more-

NASA News

National Aeronautics and
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John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

For Release:

July 13, 1988

Dick Young
Area Code 407/867-2468

KSC Release No. 51 - 88

NOTICE TO EDITORS/NEWS DIRECTORS:

SPACEPORT MANAGERS TO SCHEDULE INTERVIEWS WITH NEWS MEDIA

KENNEDY SPACE CENTER, Fla. - Exceedingly heavy work schedules have made it difficult for the Kennedy Space Center's top managers to comply with news media requests for one-on-one interviews.

To help reduce the backlog of existing requests and accommodate those to be anticipated into the near future, the following KSC managers will set aside a block of time on Tuesday, July 19, for interviews with news media representatives:

Center Director Forrest S. McCartney, Lt. Gen. USAF retired;

Thomas E. Utsman, deputy director and director of Shuttle Management and Operations;

Robert B. Sieck, launch director;

James F. Harrington, director, Shuttle Operations.

Media representatives with pending interview requests should contact the "Round Robin" Coordinator at the KSC Public Information Office at Area Code 407/867-2468 to confirm that the management interviews are still required.

Those organizations which anticipate doing interviews with any of the above named managers in the near future should contact the "Round Robin" Coordinator to make a formal request.

In all instances, those making interview requests should specify with some precision the subject matters which they wish to discuss.

Any questions concerning this series of interviews may be discussed with the "Round Robin" Coordinator, KSC Public Information Office, Area Code; 407/867-2468.

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NASA News

National Aeronautics and
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John F. Kennedy Space Center
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AC 407 867-2468

For Release:

Karl Kristofferson
(407) 867-2468

July 12, 1988

KSC Release NO. 50-88

MIMS FIRM AWARDED KSC CONTRACT

KENNEDY SPACE CENTER, Fla. -- NASA's John F. Kennedy Space Center has awarded a \$311,870 contract to Dave Chauvin Construction Company of Mims, Florida, to build a Security Training Center at KSC.

The new facility will provide a dedicated training site for security personnel of KSC's base operations contractor, EG&G, which provides security services at the Kennedy Space Center.

The training center will be located on approximately eight acres on Schwartz Road west of Kennedy Parkway, a wooded area about midway between the KSC Industrial Area and Launch Complex 39. The contract provides for site preparation and installation of chain-link fences, concrete walkways, electrical power and lighting. A 20- by 50-foot covered area also will be constructed, including platforms and a series of false-front buildings.

The fixed-price contract is a set-aside for small business. All work is to be completed within 120 days after notice to proceed.

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NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

Mitch Varnes
(407) 867-2363

For Release:
IMMEDIATE

KSC Release No. 49JJJJ-88

DUKE UNIVERSITY STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Jeanine Southerland, a physiology major at Duke University, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Jacksonville, Florida resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. Southerland plans to pursue a career as an astronaut-medical scientist.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

Mitch Varnes
(407) 867-2363

For Release:
IMMEDIATE

KSC Release No. 49FFFF-88

CHESAPEAKE RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Karen Denise Wilson of Chesapeake, Va. is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She graduate from Deep Creek High School in Chesapeake and is the daughter of Mr. and Mrs. Virnest Lee Wilson of Chesapeake.

Wilson, who is attending Norfolk State University is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The biology major plans to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
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Mitch Varnes
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For Release:
IMMEDIATE

KSC Release No. 49A-88

UNIVERSITY OF ARIZONA STUDENT PARTICIPATES IN NASA'S SPACE LIFE
SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Emily Adams, a biology major at University of Arizona, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of 36 college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Tuscon resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. Adams plans to pursue a career in medicine or research.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468

Mitch Varnes
(407) 867-2363

For Release:
IMMEDIATE

KSC Release No. 49B-88

LOCAL RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAIN-
ING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Emily Adams of Tuscon is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She is the daughter of Mr. and Mrs. Edward Blair of Tuscon.

Adams, who is attending the University of Arizona in Tuscon, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The biology major plans to pursue a career in research or medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
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Mitch Varnes
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For Release:
IMMEDIATE

KSC Release No. 49C-88

ALICE HIGH SCHOOL GRADUATE PARTICIPATES IN NASA'S SPACE LIFE
SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Cynthia Ann Bedoy, an Alice High School graduate, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She is the son or daughter of Mr. and Mrs. Raul M. Bedoy of Corpus Christi, Texas.

Bedoy, who is attending St. Mary's University in San Antonio, Texas, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. Bedoy is majoring in biology and plans to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

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John F. Kennedy Space Center

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For Release
IMMEDIATE

KSC Release No. 49D-88

ST. MARY'S UNIVERSITY STUDENT PARTICIPATES IN NASA'S SPACE LIFE
SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Cynthia Ann Bedoy, a biology major at St. Mary's University, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Corpus Christi resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. She plans to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

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For Release:
IMMEDIATE

KSC Release No. 49E-88

SANTA BARBARA CITY COLLEGE STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Angela Belcher, a biochemistry major at Santa Barbara City College, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Santa Barbara resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. Belcher plans to get a doctorate degree in biochemistry and pursue a career in teaching or research.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center

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For Release:
IMMEDIATE

KSC Release No. 49F-88

LOCAL RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAIN-
ING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Angela Belcher of Santa Barbara is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She is the daughter of Jackie Belcher of San Antonio, Texas.

Belcher, who is attending Santa Barbara City College is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. Belcher plans to get a doctorate degree in biochemistry and pursue a career in teaching or research.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

NASA News

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John F. Kennedy Space Center

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For Release:
IMMEDIATE

KSC Release No. 49G-88

EAST AMHERST RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES
TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Carolyn Bessette of East Amherst is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She is the daughter of Dr. and Mrs. Russell Bessette of Williamsville, New York.

Bessette, who is attending the University of Rochester in Rochester, New York, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. Bessette is a biology major and plans to pursue a career in aerospace medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

NASA News

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Mitch Varnes
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For Release:
IMMEDIATE

KSC Release No. 49H-88

UNIVERSITY OF ROCHESTER STUDENT PARTICIPATES IN NASA'S SPACE LIFE
SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Carolyn Bessette, a biology major at University of Rochester, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The East Amherst, New York resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. She plans to pursue a career in aerospace medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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July 11, 1988

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For Release:
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KSC Release No. 49I-88

WILLAMETTE UNIVERSITY STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- David Bloom, a biology major at Willamette University, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Salem, Oregon resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. He plans to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

NASA News

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John F. Kennedy Space Center

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Mitch Varnes
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For Release:
IMMEDIATE

KSC Release No. 49J-88

SALEM RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- David Bloom of Salem, Oregon is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

He is the son of Lance and Mary Bloom of Vancouver, Washington and Dan and Julie Hills of Eagan, Massachusetts.

Bloom, who is attending Willamette University in Salem is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The biology major plans to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468

Mitch Varnes
(407) 867-2363

For Release
IMMEDIATE

KSC Release No. 49K-88

UNIVERSITY OF NOTRE DAME STUDENT PARTICIPATES IN NASA'S SPACE
LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- William Borgos, a economics major at the University of Notre Dame, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

Borgos is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Glens Falls, New York resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. He plans to pursue a career in aerospace or sports medicine and also interested in law.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

"This program is giving me valuable firsthand experience with work in research labs," said Borgos. "I'm also gaining a greater knowledge of the history and future direction of the space program."

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 305 867-2468

Mitch Varnes
(407) 867-2363

For Release:
IMMEDIATE

KSC Release No. 49L-88

GLENS FALLS RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- William Borgos of Glens Falls, New York is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

The Queensbury High School graduate is the son of Mr. and Mrs. Stephen Borgos of Glens Falls, New York.

Borgos, who is attending the University of Notre Dame in Indiana, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The economics major plans to pursue a career in aerospace or sports medicine and is also interested in law.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

"This program is giving me valuable firsthand experience with work in research labs," said Borgos. "I am also gaining a greater knowledge of the history and future direction of the space program."

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

NASA News

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John F. Kennedy Space Center
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Mitch Varnes
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For Release:
IMMEDIATE

KSC Release No. 49KKK-88

WENATCHEE HIGH SCHOOL GRADUATE PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Mary Ann Brannon of Merritt Island is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

The Wenatchee High School graduate is the daughter of Mr. and Mrs. Thomas and Brannon of Malaga, Wash.

Brannon is one of several assistants who are teaching and developing curriculum for the Space Life Sciences Training Program, which involves 36 college students from around the country. These students are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. Brannon plans to pursue a career in biological sciences.

During the training program, the students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

NASA News

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Kennedy Space Center, Florida 32899
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For Release:
IMMEDIATE

KSC Release No. 49M-88

LAKELAND RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- David Bush of Lakeland, Florida is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

He graduated from Lakeland Christian High School and is the son of Connie Bush of Lakeland.

Bush, who is attending Florida Southern College in Lakeland is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The physical engineering major plans to pursue a career in research and development.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

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For Release:
IMMEDIATE

KSC Release No. 49N-88

FLORIDA SOUTHERN COLLEGE STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- David Bush, a physical engineering major at Florida Southern College, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Lakeland resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. He plans to pursue a career in research and development.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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July 11, 1988

NASA News

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KSC Release No. 49S-88

CLARENCE RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Christopher Cabell of Clarence, New York is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

The Clarence Central High School graduate is the son of Mr. and Mrs. Richard Hayden of Clarence.

Cabell, who is attending Pennsylvania State University, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The biology major plans to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

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National Aeronautics and
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John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
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Mitch Varnes
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For Release:
IMMEDIATE

KSC Release No. 49T-88

PENN STATE UNIVERSITY STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Christopher Cabell, a biology major at Pennsylvania State University, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Clarence, New York resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. He plans to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

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KSC Release No. 49LLL-88

DEWART RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Dr. Linda Chamberlin is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She graduated from Warrior Run High School in Turbotville and is the daughter of Mr. and Mrs. Charles Chamberlin of Watsontown, Pa.

Chamberlin is teaching and developing curriculum for the Space Life Sciences Training Program, which involves 36 college students from around the country. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year. The primary goal of the program is to attract young researchers to space life sciences careers.

During the training program, the students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

Chamberlin has a Ph.D. in biology from the State University of New York at Buffalo and is now an assistant professor in the Department of Urology in the School of Medicine there.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

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KSC Release No. 49MMM-88

SUNYAB GRADUATE PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Dr. Linda Chamberlin, an assistant professor of urology, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of several project and curriculum assistants for the Space Life Sciences Training Program. Thirty-six college students from around the country are learning how to develop and conduct space life sciences experiments for shuttle payloads. The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

Chamberlin, who earned her Ph.D. in biology from the State University of New York at Buffalo, is now an assistant professor in the Department of Urology in the School of Medicine at SUNYAB.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 490-88

COLORADO STATE UNIVERSITY STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Min-Fon Chang, an electrical engineering major at Colorado State University, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Arvada, Colorado resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. He plans to continue his education in graduate school.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment. Chang is working with computer modeling research for a controlled ecological life support system.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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For Release:
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KSC Release No. 49P-88

ARVADA RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Min-Fon Chang of Arvada, Colorado is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

He is a graduate of Arvada West High School and the son of Mr. and Mrs. Nai-Kwang Chang of Arvada.

Chang, who is attending Colorado State University in Ft. Collins, Colorado is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The electrical engineering major plans to continue his education in graduate school.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment. Chang is working with computer modeling research for a controlled ecological life support system.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49III-88

WOODROW WILSON HIGH SCHOOL GRADUATE PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- David A. DiLoreto, Jr., a Woodrow Wilson High School graduate, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

He is the son of David and Sylvia DiLoreto of Tacoma.

DiLoreto, who is attending The University of Portland, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The biology major plans to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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For Release:
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KSC Release No. 49JJJ-88

UNIVERSITY OF PORTLAND STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- David A. DiLoreto, a biology major at the University of Portland, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Tacoma, Washington resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. DiLoreto plans to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49IIII-88

WASHINGTON UNIVERSITY STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Mark Drexler, a biology major at Washington University in St. Louis, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Northbrook, Ill., resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. He plans to pursue a career in space medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49AAAA-88

UNIVERSITY OF PUERTO RICO STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. --Lai Quen Helen Fong, a student at the University of Puerto Rico, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Bayamon resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. She plans to pursue graduate studies in an area of pharmaceutical research that concentrates on space life sciences or get a job with NASA.

"My ultimate goal is to perform on the ground, and in space, investigations for the search of a potential cure to improve the health conditions in our society," said Fong.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49U-88

NATCHEZ RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- John Edison Foster of Natchez, Miss. is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

The North Natchez High School graduate is the son of Mr. and Mrs. Mr. and Mrs. Henderson Foster of Natchez.

Foster, who is attending Jackson State University in Jackson, Miss., is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The physics major plans to pursue a career in scientific research, possibly as an astronaut.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49V-88

JACKSON STATE UNIVERSITY STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- John Edison Foster, a physics major at Jackson State University, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Natchez, Miss. resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. He plans to pursue a career in research and become an astronaut.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49DDDD-88

SEWARD COUNTY COMMUNITY COLLEGE STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Sherri Diann Garcia, a student at Seward County Community College, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of several assistants who are teaching and developing curriculum for the Space Life Sciences Training Program, which involves 36 college students from around the country. These students are learning how to develop and conduct space life sciences experiments for shuttle payloads. They competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. Garcia plans to get a doctorate degree and pursue a career in research for NASA in exercise physiology.

During the training program, the students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from se sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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For Release:
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KSC Release No. 49RRR-88

LIBERAL RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Sherri Diann Garcia of Liberal, Kan. is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

The Liberal High School graduate is the daughter of Mr. and Mrs. Jim Garcia of Liberal.

Garcia is one of several people who are teaching and developing curriculum for the Space Life Sciences Training Program, which involves 36 college students from around the country. These students are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. Garcia is studying for a doctorate degree at Seward County Community College in Liberal and plans to pursue a career in research for NASA in exercise physiology.

During the training program, the students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49Q-88

AMHERST COLLEGE STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Kristin Gay, a student at Amherst College, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Woolrich, Pennsylvania resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. She plans to continue her education in graduate school.

"I'm very interested in the work NASA is doing in space and space flight," said Gay.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49R-88

WOOLRICH, PA. RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Kristin Gay of Woolrich, Pennsylvania is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She is a graduate of Waterville High School in Waterville, Pennsylvania and the daughter of Mr. and Mrs. David Gay of Woolrich.

Gay, who is attending Amherst University in Amherst, Massachusetts is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. She plans to continue her education in graduate school.

"I'm very interested in the work NASA is doing in space and space flight," said Gay.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49BB-88

ST. MARY'S COLLEGE STUDENT PARTICIPATES IN NASA'S SPACE LIFE
SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA.-- Christina Gutierrez, a biochemistry major at St. Mary's College, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Manhattan, Illinois resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. She plans to pursue a career in aerospace medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49AA-88

MANHATTAN RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES
TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Christina Gutierrez, a Lincoln-Way High School, New Lenox graduate, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She is the daughter of Dr. Daniel and Barbara Gutierrez, Manhattan.

Gutierrez, who is attending St. Mary's College in South Bend, Indiana, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The biochemistry major plans to pursue a career in aerospace medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49DD-88

UNIVERSITY OF UTAH STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Scott Harper, a biology-genetics major at the University of Utah, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Salt Lake City resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. He plans to pursue a career in aerospace medical research.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49CC-88

SALT LAKE CITY RESIDENT PARTICIPATES IN NASA'S SPACE LIFE
SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Scott Harper, 2731 Wanda Way, Salt Lake City, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

He is the son of Richard and Anne Harper of Salt Lake City.

Harper, who is attending the University of Utah in Salt Lake City, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The biology-genetics major plans to pursue a career in aerospace medical research.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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FLORIDA A & M UNIVERSITY STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Anita Hawkins, a biology major at Florida A & M University, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

Hawkins is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Orlando, Fla., resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. The biology major hopes for a medical degree and a Ph.D. in biology.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

"My emphasis is in human cardiovascular functioning," Hawkins says. "I am studying the effects of stimulation of the carotid artery baroreflexes."

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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UNIVERSITY OF SOUTHERN CALIFORNIA STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Kenneth Hayashida, a biology major at the University of Southern California at Los Angeles, is mid-way through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. He plans to pursue a degree in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

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Mitch Varnes
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KSC Release No. 49EE-88

SEAL BEACH RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES
TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Kenneth Hayashida, 4233 Candleberry Avenue, Seal Beach, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

He is the son of Kenneth and Arlene Hayashida of Seal Beach.

Hayashida, who is attending The University of Southern California, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The biology major plans to pursue a degree in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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BRONX COMMUNITY COLLEGE GRADUATE PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Dr. Rachael Heller, a Bronx Community College graduate, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She, along with her husband Dr. Richard Heller, is one of several project and curriculum assistants for the Space Life Sciences Training Program. Thirty-six college students from around the country are learning how to develop and conduct space life sciences experiments for shuttle payloads. The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49QQQ-88

BRONX COMMUNITY COLLEGE GRADUATE PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Dr. Richard Heller is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He, along with his wife Dr. Rachel Heller, is one of several project and curriculum assistants for the Space Life Sciences Training Program. Thirty-six college student from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

Dr. Heller is a full professor of biology and director of the minority biomedical research support program.

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KSC Release No. 49GG-88

TALLAHASSEE RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Jon L. Hobbs, Tallahassee, is mid-way through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

He is the son of Dr. Thomas and Harriet Hobbs of Tallahassee.

Hobbs, who is attending Florida State University, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The biological sciences major plans to obtain a medical degree and enter the astronaut program.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49HH-88

FLORIDA STATE UNIVERSITY STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Jon L. Hobbs, a biological science major at Florida State University, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Tallahassee resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. Hobbs plans to pursue a medical degree and enter the astronaut program.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49II-88

ALMA RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Kelly Renee Holcomb, 520 Fairlane Drive, Alma, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

Holcomb, who is attending Alma College, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. Holcomb plans to pursue a career in physical therapy.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49JJ-88

ALMA COLLEGE STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Kelly Renee Holcomb, a physical therapy major at Alma College, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Alma resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. Holcomb plans to pursue a career in physical therapy.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49KK-88

POPLAR BLUFF RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Jon T. Hopkins, Poplar Bluff, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

He is the son of Mr. and Mrs. John R. Hopkins, 1310 Lurlyn, Poplar Bluff.

Hopkins, who is attending Rhodes College in Memphis, Tennessee, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The chemistry major plans to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49LL-88

RHODES COLLEGE STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- John T. Hopkins, a chemistry major at Rhodes College, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

Hopkins is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Poplar Bluff, Missouri resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. Hopkins plans to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49NN-88

NORFOLK STATE UNIVERSITY STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Clevester Jones, an electrical engineering major at Norfolk State University, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Dry Fork, Virginia, resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. He (or she) plans to pursue a career in engineering.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49MM-88

DRY FORK RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Clevester Jones, Dry Fork, is mid-way through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

He is the son of Mr. and Mrs. Olandus Jones of Dry Fork.

Jones, who is attending Norfolk State University, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The electrical engineering major plans to pursue a career in engineering.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49WWW-88

BAYAMON RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Lai Quen Helen Fong of Bayamon, Puerto Rico, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She graduated from Colegiodela Milagrosa in Rio Piedras, Puerto Rico and is the daughter of Fong Sin Lam and Ngan Fung Fong of Bayamon. Her husband is Larry Chiang of Bayamon.

Fong, who is attending the University of Puerto Rico in San Juan, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. She plans to pursue graduate studies in an area of pharmaceutical research that concentrates on space life sciences or work for NASA.

"My ultimate goal is to perform on the ground, and in space, investigations for the search of potential cure to improve the health conditions in our society," said Fong.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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For Release:
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KSC Release No. 49VVV-88

SPELMAN COLLEGE FACULTY MEMBER PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Rena Jones, a chairperson in the biology department at Spelman College, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She one of several assistants who are teaching and developing curriculum for the Space Life Sciences training Program, which involves 36 college students from around the country. These students are learning how to develop and conduct space life sciences experiments for shuttle payloads. They competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 4900-88

HONOLULU RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Carol K. Kaapu, 1037 Hemolele Place, Honolulu is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

Kaapu, who is attending the University of Hawaii at Hilo, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The physics and astronomy major plans to pursue a career in this area.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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UNIVERSITY OF HAWAII STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Carole K. Kaapu, a physics and astronomy major at the University of Hawaii at Hilo is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Honolulu resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. He (or she) plans to pursue a career in astronomy.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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DENTON RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Erik C. Koon, Denton, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

He is the son of Homer and Ruth Koon of Denton.

Koon, who is attending Baylor University, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The biology major plans to pursue a career inspace biology research.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49RR-88

BAYLOR UNIVERSITY STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Erik C. Koon, a biology major at Baylor University, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Denton, Texas resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. Koon plans to pursue a career in space biology research.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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SILVER SPRING RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Daniel Kraft, Silver Spring, Maryland, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

He is the son of Michael and Lisa Kraft of Silver Spring.

Kraft, who is attending Brown University, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The biochemistry major plans to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49TT-88

BROWN UNIVERSITY STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Daniel Kraft, a biochemistry major at Brown University, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. Kraft plans to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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STOCKBRIDGE RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Karen Loeb, a Stockbridge, Mass., resident, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She is the daughter of Mr. and Mrs. Walter Loeb of Rye, New York, and Stockbridge, Mass.

Loeb, who is attending New York University, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The pre-med student plans to pursue a career in neurology.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

"I hope to gain experience in applied science, space physiology, and NASA's role in these two areas," NASA said.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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RYE HIGH SCHOOL GRADUATE PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Karen Loeb, a Rye High School graduate, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She is the daughter of Mr. and Mrs. Walter Loeb of Rye and also of Stockbridge, Mass.

Loeb, who is attending New York University, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The pre-med major plans to pursue a career in the field of neurology.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

"I hope to gain experience in applied science, space physiology and NASA's role in these two areas," Loeb said.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49TTT-88

NEW YORK UNIVERSITY STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. --Karen Loeb, a pre-med student at New York University, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

Loeb is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Stockbridge, Mass., resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. Loeb plans to pursue a career in the field of neurology.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

"I hope to gain experience in applied science, space physiology, and NASA's role in these two areas," Loeb said.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

NASA News

National Aeronautics and
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Mitch Varnes
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KSC Release No. 49VV-88

FLORIDA A&M STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Zandra K. Mallory, a pharmacy major at Florida A&M, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

Mallory is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Savannah, Georgia resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. Mallory plans to pursue a career in pharmacy.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49UU-88

WINDSOR FOREST HIGH SCHOOL GRADUATE PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Zandra Y. Mallory, a Windsor Forst High School graduate, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She is the daughter of Mr. and Mrs. Alfred Mallory, Savannah.

Mallory, who is attending Florida A&M University, Tallahassee, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The pharmacy major plans to pursue a career in that field.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49YYY-88

STATE UNIVERSITY OF NEW YORK STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Demetrius Moutsiakis, a chemistry major at the State University of New York, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Lindenhurst, N.Y., resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. He plans to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

"I am attending the SLSTP so that I can learn about current NASA research on the effects of space on biological processes," Moutsiakis said.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49XX-88

BELMONT ABBEY COLLEGE STUDENT PARTICIPATES IN NASA'S SPACE LIFE
SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- George L. Nichols, a biology and chemistry major at Belmont Abbey College in Belmont, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Gastonia resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. Nichols plans to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49WW-88

ASBROOK HIGH SCHOOL GRADUATE PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- George L. Nichols, Jr., an Asbrook High School graduate, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

He is the son of Dr. and Mrs. George L. Nichols of Gastonia.

Nichols, who is attending Belmont Abbey College in Belmont, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The biology and chemistry major plans to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49BBBB-88

AIEA HIGH SCHOOL GRADUATE PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Rhodora P. Olegario, an Aiea High School graduate, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She is the daughter of Mr. and Mrs. Ricardo E. Olegario of Aiea.

Olegario, who is attending the University of Hawaii at Manoa, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The chemistry major plans hopes to become a Shuttle mission specialist.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49ZZZ-88

UNIVERSITY OF HAWAII STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Rhodora P. Olegario, a chemistry major, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Alea, Hawaii, resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. She hopes someday to be a Space Shuttle mission specialist.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49ZZ-88

COLLEGE OF ST. ELIZABETH STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Maryann Panei, a biology major at the College of St. Elizabeth, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Succasunna resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. Panei plans to pursue a career in medical research.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49YY-88

ROXBURY HIGH SCHOOL GRADUATE PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Maryann Panei, a Roxbury High School graduate, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She is the daughter of Ralph and Sarah Jane Panei of Succasunna.

Panei, who is attending the College of St. Elizabeth, Convent Station, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The biology major plans to pursue a career in medical research.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49EEE-88

SUNY AT BUFFALO STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Ashok B. Patel, a mechanical engineering major at SUNY at Buffalo, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Waverly, New York resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. Patel to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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WAVERLY RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Ashok B. Patel, Waverly, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

He is the son of Dr. and Mrs. Patel, 3 Sawyer Place, Waverly.

Patel, who is attending the State University of New York at Buffalo, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The mechanical engineering major plans to pursue a career in medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49CCCC-88

CHATTANOOGA RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Theron Mark Pettit, a Chattanooga resident, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

He is the son of Joan Pettit of Chattanooga.

Pettit, who is attending Covenant College in Lookout Mt., Georgia, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The physics major plans to pursue a career in physics research.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

"I am emphasizing the phenomenon of decreased carotid sinus and cardiopulmonary baroreflex responsiveness after return from spaceflight," Pettit said. "I hope to gain exposure to fields of research which are of current interest to NASA in order to direct my future educational pursuits."

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49IIIII-88

COVENANT COLLEGE STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Theron Mark Pettit, a physics major at Covenant College, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Chattanooga, Tenn., resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. He plans to pursue a career in physics research.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

"I am emphasizing the phenomenon of decreased carotid sinus and cardiopulmonary baroreflex responsiveness after return from spaceflight," Pettit said. "I hope to gain exposure to fields of research which are of current interest to NASA in order to direct my future educational pursuits."

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49HHH-88

OREGON STATE UNIVERSITY STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Namtran Hong Pham, a pre-medicine major at Oregon State University, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

He is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Beaverton, Oregon resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. Pham plans to pursue a career in aerospace medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49GGG-88

BEAVERTON RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Namtran Hong Pham, Beaverton, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

He is the son of Hanh Van and Kimmal Hong Pham of Beaverton.

Pham, who is attending Oregon State University, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. The pre-medicine major plans to pursue a career in aerospace medicine.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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ROCKLEDGE RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Carol Jean Price of Rockledge is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She graduated from Eau Gallie High School in Melbourne and is the daughter of Alma Price of Melbourne and William Price of Cape Canaveral.

Price is teaching and developing curriculum for the Space Life Sciences Training Program, which involves 36 college students from around the country. These students are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year. The primary goal of the program is to attract young researchers to space life sciences careers.

During the training program, the students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

Price has a master's degree in biology and plans to combine space life science research with community college or university teaching. She is currently teaching anatomy and physiology at Brevard Community College in Melbourne.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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BCC INSTRUCTOR PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Carol Price, an instructor at Brevard Community College, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of several project and curriculum assistants for the Space Life Sciences Training Program. Thirty-six college students from around the country are learning how to develop and conduct space life sciences experiments for shuttle payloads. These students competed against 400 applicants for the opportunity to participate in the program. The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

Price has a master's degree in biology and plans to combine space life science research with community college or university teaching. She is currently teaching anatomy and physiology at Brevard Community College in Melbourne.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49BBB-88

PURDUE UNIVERSITY STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Tanya A. Royster, a psychology major at Purdue University, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Gary resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. Royster plans to pursue a career in psychiatry.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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THEODORE ROOSEVELT HIGH SCHOOL GRADUATE PARTICIPATES IN NASA'S
SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Tanya A. Royster, a Theodore Roosevelt High School graduate, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She is the daughter of Clarence and Mozella Royster of Gary.

Royster, who is attending Purdue University, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. Royster plans to pursue a career in psychiatry.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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KSC Release No. 49DDD-88

DUKE UNIVERSITY STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Janine Southerland, a physiology major at Duke University, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Jacksonville, Florida resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. Southerland plans to pursue a career as an astronaut-medical scientist.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

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KSC Release No. 49CCC-88

BISHOP KENNY HIGH SCHOOL GRADUATE PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Jeanine Southerland, a Bishop Kenny High School graduate, is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She is the daughter of Mr. and Mrs. James A. Southerland of Jacksonville.

Southerland, who is attending Duke University, is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 applicants competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. Southerland plans to pursue a career in as an astronaut-medical scientist.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

Mitch Varnes
(407) 867-2363

For Release:
IMMEDIATE

KSC Release No. 49X-88

VACAVILLE RESIDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Dana Tatro of Vacaville, Calif. is midway through an intensive life sciences program, sponsored by NASA at the Kennedy Space Center.

She is the daughter of Lt. Col. and Mrs. and Richard C. Hale of Vacaville.

Tatro is one of several people who are project and curriculum assistants for the Space Life Sciences Training Program this year. Thirty-six college students from around the country are learning how to develop and conduct space life sciences experiments for shuttle payloads. About 400 students competed for the opportunity to participate in the program, which is in its fourth year.

The primary goal of the program is to attract young researchers to space life sciences careers. Tatro has a master's degree in exercise physiology.

She is helping the students work in teams while they participate in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

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(407) 867-2363

For Release:
IMMEDIATE

KSC Release No. 49EEEE-88

NORFOLK STATE UNIVERSITY STUDENT PARTICIPATES IN NASA'S SPACE LIFE SCIENCES TRAINING PROGRAM

KENNEDY SPACE CENTER, FLA. -- Karen Denise Wilson, a biology major at Norfolk State University, is midway through an intensive life sciences training program sponsored by NASA at the Kennedy Space Center.

She is one of 35 other college students from around the country who are learning how to develop and conduct space life sciences experiments for shuttle payloads. The Chesapeake, Va. resident competed against 400 applicants for the opportunity to participate in the program.

The primary goal of the Space Life Sciences Training Program, which is in its fourth year, is to attract young researchers to space life sciences careers. She plans to become a pediatrician.

The students work in teams and each can earn five college credits while participating in the design and preparation of potential space flight payloads. The work emphasizes the unique features of experiments conducted in a micro-gravity environment in contrast to those done in laboratories on earth. They are studying a variety of conditions, from space sickness to harvesting plants in a weightless environment.

The summer program continues through July and involves students from colleges and universities throughout the United States and its territories.

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July 11, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 407 867-2468

Dick Young
Area Code 407/867-2468

For Release:

KSC Release No. 48-88

July 8, 1988

NOTICE TO EDITORS/NEWS DIRECTORS:

NEWS CONFERENCE SCHEDULED JULY 8 ON MANNED SLIDEWIRE RUNS

KENNEDY SPACE CENTER, Fla. - A manned demonstration of the emergency egress (slidewire) system at Complex 39's Pad B is scheduled for the afternoon of Friday, July 8.

A post-demonstration news conference is tentatively scheduled for the KSC News Center Auditorium for 4:30 p.m. on July 8 if weather conditions and technical considerations permit completion of the tests.

Although this system has been certified and validated to support human usage, the purpose of this manned verification test is to instill confidence in the users.

Participants in the two manned runs include astronaut Charles Bolden, fire rescue crewman George Hoggard and closeout crewman Albert "Junior" Bumgardner.

The schedule calls for the release of two baskets at different times. Astronaut Charles Bolden will ride alone for the first basket release. After he completes the first run to the slidewire terminus to the west of the pad, he will return to the 195-foot level of the Fixed Service Structure and prepare for the second run. He will be joined by Hoggard and Bumgardner for the second and last basket release.

News conference participants will include slidewire demonstration run crewmen and Michael D. Leinbach, test director in KSC's Test Operations Branch.

The conference will be carried on the NASA Select Television System accessible on Satcom F2R, transponder 13.

It may also be monitored on KSC's V-2 system, which may be reached by dialing Area Code 407/867-1220/1240 or 1260.

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NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Cynthia Buck
407/867-2468

Immediate

KSC Release No. 47-88

MENTOR GRAPHICS CORP. WINS CONTRACT FOR COMPUTER-AIDED WORKSTATIONS

KENNEDY SPACE CENTER, Fla. -- NASA's John F. Kennedy Space Center has awarded a \$263,002 contract to Mentor Graphics Corp., Beaverton, Ore., to provide two computer-aided engineering workstations in the Launch Processing System.

The work stations are required to maximize engineering design productivity and provide design analysis capability for updating test designs and special interfaces in the Space Transportation System's Central Data Subsystem while providing the latest circuit design technology. The workstations will provide high resolution graphics for real time viewing of design simulations.

The fixed price contract requires the contractor to complete all work within 90 days after notice to proceed.

July 5, 1988

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NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

July 5, 1988

George Diller
Tel. 407/867-2468

KSC Release No. 45-88

BUTLER CONSTRUCTION COMPANY WINS CONTRACT FOR VIP SITE AT KSC

Kennedy Space Center, Fla. -- NASA's John F. Kennedy Space Center has awarded a \$300,500 contract to Butler Construction Company of Rockledge, Fla. for construction of the first phase of a new protocol viewing area for special invited guests to watch Space Shuttle launches.

The site is located on Bananna Creek, approximately two miles north of the Vehicle Assembly Building on Complex 39.

The work includes land clearing and other site preparation, a new stabilized roadway and parking area, a storm water retention area, AC power, and communications capabilities.

The fixed price contract is a set-aside for small business. Work is to be completed over a period of not more than 120 days.

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NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

July 5, 1988

George Diller
Tel. 407/867-2468

KSC Release No. 46-88

HAMILTON ROOFING, INC. OF PALM BAY WINS SMALL BUSINESS SET ASIDE

Kennedy Space Center, Fla. -- NASA's John F. Kennedy Space Center has awarded a contract to Hamilton Roofing, Inc. of Palm Bay, Fla. for re-roofing designated portions of the Headquarters Building, located in the KSC Industrial Area.

The firm will provide the labor, equipment, and materials to remove the existing roof from the east and west wings of KSC Headquarters and install a new "built-up" roof.

The fixed price contract, valued at \$163,000, is a set-aside for small business. Work is to be completed within 90 days.

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NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Lisa Malone
Kennedy Space Center, Fla.
(407) 867-2468

July 4, 1988

KSC News Release No. 44-88

MILESTONE TO LAUNCH: DISCOVERY ROLLS TO LAUNCH PAD 39-B

KENNEDY SPACE CENTER, Fla. -- When the Space Shuttle Discovery begins the journey to Launch Pad 39-B today, America's space program will reach a level of enthusiasm unrivaled since the first space shuttle launch in 1981.

Since the fall of 1986, KSC workers have been modifying and preparing the shuttle Discovery for its upcoming and long-awaited journey into space. Discovery was transferred from its processing hangar to the Vehicle Assembly Building June 21 of this year and was bolted to the external tank a few days later.

Yesterday, space center workers completed the Shuttle Interface Test which verified the connections between the orbiter Discovery, the external tank, solid rocket boosters and mobile launcher platform. In addition, several tests were conducted to verify the systems on the SRBs.

While Discovery was being prepared for flight, the redesigned solid rocket boosters were being stacked in the Vehicle Assembly Building. The two-month stacking operation began March 28, 1988 with the left booster and was completed on May 28.

Once at the pad, workers will begin validating connections between the launch pad and the shuttle vehicle elements. During the first few weeks, workers will be making preparations for the Flight Readiness Firing (FRF) scheduled for late July. The FRF is a 20-second test firing of Discovery's main engines designed to confirm the integrity of the overall Shuttle system.

The FRF will be preceded by the Wet Countdown Demonstration Test (WCDDT), during which the external tank will be filled with its flight load of liquid oxygen and liquid hydrogen propellants. This test, scheduled approximately 72 hours prior to the FRF, will verify hardware, equipment and procedures involved in the tanking process.

About one week after the FRF, the Tracking and Data Relay Satellite (TDRS) and its Inertial Upper Stage will be taken to the pad and installed into Discovery's payload bay. Interface verification checks of connections between the payload and the shuttle, and between the payload and ground stations, are planned after the installation. During a space shuttle mission, TDRS operates as a voice and data relay station between mission controllers in Houston and the space shuttle and other low earth orbiting spacecraft.

Another major activity planned at the pad is the Terminal Countdown Demonstration Test (TCDT), scheduled approximately three weeks prior to launch. This is a "dress rehearsal" of launch day for the STS-26 flight crew and for members of the KSC launch team. The actual launch countdown will pick up about two days prior to liftoff.

NASA plans to launch the Space Shuttle Discovery in early September on mission STS-26. A veteran shuttle crew of five are scheduled to orbit the Earth on a four-day mission. The STS-26 commander is Rick Hauck, the pilot is Dick Covey and the three mission specialists are Dave Hilmers, George "Pinky" Nelson and Mike Lounge. The primary objective of the mission will be to deploy the TDRS satellite. TDRS will augment the existing TDRS in providing up to 85 percent coverage per orbit for a space shuttle mission.

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NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 305 867-2468

For Release:
July 1, 1988

George H. Diller
Tel. 407/867-2468

KSC Release No. 43-88

NOTICE TO EDITORS/NEWS DIRECTORS

STS-26 SATELLITE PAYLOAD AVAILABLE FOR PHOTOGRAPHY ON JULY 7

KENNEDY SPACE CENTER, Fla. -- The primary payload to be launched on the STS-26 Space Shuttle mission will be available for a photo opportunity on Thursday, July 7. The TDRS-C spacecraft has been mated to the Inertial Upper Stage (IUS) and has completed its required checkout prior to placement in the payload canister. The spacecraft will await transportation to the launch pad with the move scheduled to occur after the Flight Readiness Firing of the Space Shuttle Discovery's main engines. Final pre-launch testing of the payload will be done on Pad B at Launch Complex 39.

The IUS/TDRS combination will be viewed in the clean room of the Vertical Processing Facility where the final assembly and checkout has been underway. All access and work platforms will have been retracted in preparation for the payload's removal from the test cell.

Because of the TDRS susceptibility to certain contaminants, those attending the showing are asked to refrain from using hairspray or makeup on the day of the event. Also, long pants and low-heeled, close-toed shoes will be required to gain access to the clean room area. White room attire will be provided.

No flame producing devices can be allowed in any part of the Vertical Processing Facility. Please note that available light only may be used for photography. All equipment should have internal power.

There is no briefing associated with this event; however, appropriate spokesmen will be available to answer questions about the IUS/TDRS checkout process and the upcoming transportation of the spacecraft to Pad B on Launch Complex 39. The payload canister and associated transporter will also be in the facility at the time of the event.

A confirmation of attendance is necessary. Those wishing to participate should contact the KSC News Center at 407/867-2468 no later than the close of business, Wednesday July 6 to list their news organization. Media representatives who will require accreditation may make arrangements for badging at that time.

On Thursday, July 7, media representatives should be at the KSC News Center by 5:30 p.m. for transportation and escort to the Vertical Processing Facility located in the KSC Industrial Area.

Because the spacecraft and upper stage continue in the processing flow, press representatives should call the KSC News Center to confirm that the event remains on schedule. The codaphone will also contain a status report. It may be reached at 407/867-2525.

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NASA News

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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Immediate

Dick Young
Area Code 407/867-2468

KSC Release No. 42-88

NOTICE TO EDITORS/NEWS DIRECTORS

ROLLOUT NEWS CONFERENCE SCHEDULED FOR FRIDAY, JULY 1

KENNEDY SPACE CENTER, Fla. - A news conference on the rollout of Discovery to Complex 39's Pad B in preparation for launch on the Space Shuttle STS-26 mission will be held in the KSC News Center Auditorium at 11 a.m. EDT on Friday, July 1.

Discovery was moved from the Orbiter Processing Facility to the Vehicle Assembly Building on June 21 for mating with the other shuttle elements and is now undergoing testing prior to being rolled to the pad.

James F. Harrington, KSC's director of Space Shuttle Operations, will discuss vehicle status, rollout plans and test operations at Pad B following the move.

The briefing will be carried by NASA Select Television and a two-way question and answer capability will be available at NASA Headquarters and participating NASA centers. It will be carried on the RCA Satcom F2R satellite, Transponder 13, 72 degrees longitude.

News media representatives unable to cover from NASA facilities may monitor the conference on the V-2 Circuit by calling Area Code 407/867-1220/1240 or 1260.

At KSC, media representatives with permanent credentials may drive directly to the News Center. Those who require access badges should contact the News Center at Area Code 407/867-2468 to make the necessary arrangements.

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June 30, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Pat Phillips
(407) 867-2468

July 1, 1988

KSC Release No. 41-88

PLAYALINDA BEACH TO BE CLOSED FOR STS-26 LAUNCH

KENNEDY SPACE CENTER, Fla. -- Playalinda Beach will be closed to visitors as early as this weekend--possibly as of Sunday night--in preparation for the launch of the STS-26 mission in September.

The beach closing is required because of the rollout of the orbiter Discovery to Launch Pad 39 B. That rollout, a significant milestone in America's return to flight, is currently scheduled for no earlier than 12:01 a.m. Monday, July 4.

Normally, security regulations require that the beach be closed 24 hours prior to a rollout to the pad. However, consideration has been given to the July 4 holiday. FOR THIS ROLLOUT ONLY, the regulations have been adapted to set a beach closing time at sundown the day before the orbiter moves to the pad.

Based on a Monday, July 4 rollout, Playalinda Beach would be closed as of sundown Sunday night, thus allowing beachgoers access on two days of the three-day holiday. Should Discovery's move take place on Tuesday, the beach would be open the entire weekend.

The beach, part of the Canaveral National Seashore, will remain closed until 24 hours after launch of the STS-26 mission early in September. Beachgoers who had planned to visit Playalinda Beach this weekend should call the Canaveral National Seashore office at (407) 267-1110 for information on any changes in the beach closing time.

Information may also be obtained by calling a recorded message at the NASA News Center at (407) 867-2525.

Other Canaveral National Seashore beaches such as Apollo Beach will remain open after rollout. They may be reached through the north beach entrance south of New Smyrna Beach.

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NASA News

National Aeronautics and
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Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Pat Phillips
(407) 867-2468

June 27, 1988

KSC Release No. 40-88

AUL INSTRUMENTS, INC. WINS KSC COMMUNICATIONS CONTRACT

KENNEDY SPACE CENTER, Fla. -- NASA'S John F. Kennedy Space Center has selected Aul Instruments, Inc., of Garden City, N.Y. for negotiations leading to the award of a contract for a digital operational intercom system (OIS-D).

The proposed cost for the fixed-price contract is approximately \$10.1 million, with work to be performed over a period of three years. The OIS-D is a digital voice communications system used in Space Shuttle and payload processing as well as launch activities at KSC.

Aul Instruments, Inc., will produce, test, deliver, and provide support services for approximately 5,000 pieces of OIS-D hardware. This system will replace older hardware, thereby upgrading internal communication capabilities at several KSC sites, including the Launch Control Center (LCC).

Proposals also were submitted by Electrospace Systems, Inc., Richardson, Tex.; Fairchild Weston Systems, Sarasota, Fla.; Ford Aerospace Corp., Houston, Tex.; Martin Marietta Information and Communications Systems, Littleton, Colo.; Metric Systems, Ft. Walton Beach, Fla.; Menemonics Manufacturing, Inc., Melbourne, Fla.; DBA Systems, Inc., Melbourne, Fla.; Datacom, Inc., Ft. Walton Beach, Fla.; Symetrics Industries, Inc. Melbourne, Fla.; Grim Corporation, Medford, N.J.; Mil-Com Electronics, San Antonio, Texas; and Sprengnether Instruments, Inc., St. Louis, Mo.

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NASA News

National Aeronautics and
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John F. Kennedy Space Center

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Pat Phillips
(407) 867-2468

For Release:

July 1, 1988

KSC Release No. 38-88

SPECIAL TO GREENSBORO NEWS

GREENSBORO NATIVE PROMOTED AT KENNEDY SPACE CENTER, FLA.

KENNEDY SPACE CENTER, Fla. -- James F. Harrington, a 1953 graduate of Greensboro Sr. High School, has been appointed director, Space Shuttle Operations at Kennedy Space Center. In his new position, Harrington is responsible for the operational management of all KSC prelaunch, landing and recovery operations for Space Shuttle vehicles.

A native of Greensboro, Harrington has a distinguished record of career achievements in America's space program. He came to KSC in 1966 as a senior test supervisor on the Apollo Lunar Landing Program. He began operational support of the Space Shuttle program in 1976, when he served as a senior test conductor in the Orbiter Processing Branch.

In 1980, he was promoted to chief of the Orbiter/External Tank Processing Branch, serving in that position for the second through seventh Space Shuttle missions. He also supported the program as KSC's senior ground operations manager for orbiter landing and turnaround operations at Dryden Flight Research Facility, Edwards Air Force Base, Calif., and at facilities at White Sands, New Mexico, as well as KSC.

As flow director for seven STS missions, Harrington carried the responsibility of oversight of the Space Shuttle launch preparations during the technically-demanding processing flow. He also served as alternate launch director during major testing associated with these operations. In July, 1986, he was named deputy director, Space Shuttle Operations, where he served until his appointment as director.

Harrington has been honored with two Exceptional Service Medals and two Certificates of Commendation. These awards signify the excellence of his work from Apollo missions through the Space Shuttle era.

After graduation from Greensboro Sr. High, Harrington earned a B.S. degree in electrical engineering from the University of Miami, Coral Gables, Fla. He and his wife, Jean, and their two children live in Melbourne, Fla.

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NOTE TO EDITOR: A b/w photograph is included in this release. A color photograph is available from the NASA KSC newsroom.

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



Pat Phillips
(407) 867-2468

For Release:

July 1, 1988

KSC Release No. 37-88

SPECIAL TO THE UNIVERSITY OF MIAMI

UNIV. OF MIAMI ALUMNUS PROMOTED AT KENNEDY SPACE CENTER, FLA.

KENNEDY SPACE CENTER, Fla. -- James F. Harrington, a 1957 graduate of the University of Miami, has been appointed director, Space Shuttle Operations at Kennedy Space Center. In his new position, Harrington is responsible for the operational management of all KSC prelaunch, landing and recovery operations for Space Shuttle vehicles.

Harrington, who earned a B.S. degree in electrical engineering while at the University of Miami, has a distinguished record of career achievements in America's space program. He came to KSC in 1966 as a senior test supervisor on the Apollo Lunar Landing Program. He began operational support of the Space Shuttle program in 1976, when he served as a senior test conductor in the Orbiter Processing Branch.

In 1980, he was promoted to chief of the Orbiter/External Tank Processing Branch, serving in that position for the second through seventh Space Shuttle missions. He also supported the program as KSC's senior ground operations manager for orbiter landing and turnaround operations at Dryden Flight Research Facility, Edwards Air Force Base, Calif., and at facilities at White Sands, New Mexico, as well as KSC.

As flow director for seven STS missions, Harrington carried the responsibility of oversight of the Space Shuttle launch preparations during the technically-demanding processing flow. He also served as alternate launch director during major testing associated with these operations. In July, 1986, he was named deputy director, Space Shuttle Operations, where he served until his appointment as director.

Harrington has been honored with two Exceptional Service Medals and two Certificates of Commendation. These awards signify the excellence of his work from Apollo missions through the Space Shuttle era.

He and his wife, Jean, and their two children live in Melbourne, Fla.

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NOTE TO EDITOR: A b/w photograph is included with this release. A color photograph is available from the NASA KSC newsroom.

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468

Joseph Green
(407) 867-4444

For Release:
IMMEDIATE

KSC Release No. 3688-A

PADUCAH AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION AWARD

KENNEDY SPACE CENTER, FLA. -- Renee B. Adams, 5329 Epperson Road, Paducah, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. She teaches 5th grade at Emma Morgan Elementary in Paducah.

The NEWEST program is sponsored by NASA, and supported by the National Science Teachers Association (NSTA) and the National Council of Teachers of Mathematics (NCTM). Elementary teachers in grades 1 through 6 are selected to participate under procedures administered by NSTA. Awardees receive national recognition, with all expenses paid for the nine-day workshop.

The program is held at a NASA research center so that the teachers can see first hand how the facility operates, find out what resources are available, and learn about the most recent developments in the agency's projects and activities.

During the workshops, the 20 NEWEST teachers interacted with NASA experts and curriculum development specialists to find out how space and aeronautics can fit into all levels of elementary education. They also saw how to conduct model rocket experiments and run laser and physics demonstrations as direct examples of how to involve their students in specific aerospace-related projects.

Other key parts of the workshops were sessions on how to access information from the NASA Educators Resources Laboratory, a tour of Space Shuttle operations facilities at Kennedy Space Center, and seminars on upcoming unmanned planetary exploration missions, the Space Station, and other possible future NASA projects such as lunar colonization and a manned mission to Mars.

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June 21, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468

Joseph Green
(407) 867-4444

For Release:
IMMEDIATE

KSC Release No. 3688-B

WEYAUWEGA AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION AWARD

KENNEDY SPACE CENTER, FLA. -- Robert A. Anibas, 101 East High Street, Weyauwega, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. He teaches 6th grade at Weyauwega-Fremont Middle School.

The NEWEST program is sponsored by NASA, and supported by the National Science Teachers Association (NSTA) and the National Council of Teachers of Mathematics (NCTM). Elementary teachers in grades 1 through 6 are selected to participate under procedures administered by NSTA. Awardees receive national recognition, with all expenses paid for the nine-day workshop.

The program is held at a NASA research center so that the teachers can see first hand how the facility operates, find out what resources are available, and learn about the most recent developments in the agency's projects and activities.

During the workshops, the 20 NEWEST teachers interacted with NASA experts and curriculum development specialists to find out how space and aeronautics can fit into all levels of elementary education. They also saw how to conduct model rocket experiments and run laser and physics demonstrations as direct examples of how to involve their students in specific aerospace-related projects.

Other key parts of the workshops were sessions on how to access information from the NASA Educators Resources Laboratory, a tour of Space Shuttle operations facilities at Kennedy Space Center, and seminars on upcoming unmanned planetary exploration missions, the Space Station, and other possible future NASA projects such as lunar colonization and a manned mission to Mars.

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June 21, 1988

NASA News

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Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
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Joseph Green
(407) 867-4444

For Release:
IMMEDIATE

KSC Release No. 3688-C

PAXTON AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION AWARD

KENNEDY SPACE CENTER, FLA. -- Barbara S. Berka, 14 Walbridge Road, Paxton, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. She teaches grades K through 5 at Bancroft School in Worcester.

The NEWEST program is sponsored by NASA, and supported by the National Science Teachers Association (NSTA) and the National Council of Teachers of Mathematics (NCTM). Elementary teachers in grades 1 through 6 are selected to participate under procedures administered by NSTA. Awardees receive national recognition, with all expenses paid for the nine-day workshop.

The program is held at a NASA research center so that the teachers can see first hand how the facility operates, find out what resources are available, and learn about the most recent developments in the agency's projects and activities.

During the workshops, the 20 NEWEST teachers interacted with NASA experts and curriculum development specialists to find out how space and aeronautics can fit into all levels of elementary education. They also saw how to conduct model rocket experiments and run laser and physics demonstrations as direct examples of how to involve their students in specific aerospace-related projects.

Other key parts of the workshops were sessions on how to access information from the NASA Educators Resources Laboratory, a tour of Space Shuttle operations facilities at Kennedy Space Center, and seminars on upcoming unmanned planetary exploration missions, the Space Station, and other possible future NASA projects such as lunar colonization and a manned mission to Mars.

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June 21, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468

Joseph Green
(407) 867-4444

For Release:
IMMEDIATE

KSC Release No. 3688-D

KENNEWICK AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION
AWARD

KENNEDY SPACE CENTER, FLA. -- Bruce A. Cannard, 670 North Sheppard, Kennewick, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. He teaches 6th grade at Desert Hills Middle School in Kennewick.

The NEWEST program is sponsored by NASA, and supported by the National Science Teachers Association (NSTA) and the National Council of Teachers of Mathematics (NCTM). Elementary teachers in grades 1 through 6 are selected to participate under procedures administered by NSTA. Awardees receive national recognition, with all expenses paid for the nine-day workshop.

The program is held at a NASA research center so that the teachers can see first hand how the facility operates, find out what resources are available, and learn about the most recent developments in the agency's projects and activities.

During the workshops, the 20 NEWEST teachers interacted with NASA experts and curriculum development specialists to find out how space and aeronautics can fit into all levels of elementary education. They also saw how to conduct model rocket experiments and run laser and physics demonstrations as direct examples of how to involve their students in specific aerospace-related projects.

Other key parts of the workshops were sessions on how to access information from the NASA Educators Resources Laboratory, a tour of Space Shuttle operations facilities at Kennedy Space Center, and seminars on upcoming unmanned planetary exploration missions, the Space Station, and other possible future NASA projects such as lunar colonization and a manned mission to Mars.

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June 21, 1988

NASA News

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Joseph Green
(407) 867-4444

For Release:
IMMEDIATE

KSC Release No. 3688-E

EAU CLAIRE AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION AWARD

KENNEDY SPACE CENTER, FLA. -- Judy Fadness, 3657 South Mission Drive, Eau Claire, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. She teaches 3rd grade at Locust Lane Elementary in Eau Claire.

The NEWEST program is sponsored by NASA, and supported by the National Science Teachers Association (NSTA) and the National Council of Teachers of Mathematics (NCTM). Elementary teachers in grades 1 through 6 are selected to participate under procedures administered by NSTA. Awardees receive national recognition, with all expenses paid for the nine-day workshop.

The program is held at a NASA research center so that the teachers can see first hand how the facility operates, find out what resources are available, and learn about the most recent developments in the agency's projects and activities.

During the workshops, the 20 NEWEST teachers interacted with NASA experts and curriculum development specialists to find out how space and aeronautics can fit into all levels of elementary education. They also saw how to conduct model rocket experiments and run laser and physics demonstrations as direct examples of how to involve their students in specific aerospace-related projects.

Other key parts of the workshops were sessions on how to access information from the NASA Educators Resources Laboratory, a tour of Space Shuttle operations facilities at Kennedy Space Center, and seminars on upcoming unmanned planetary exploration missions, the Space Station, and other possible future NASA projects such as lunar colonization and a manned mission to Mars.

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June 21, 1988

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IMMEDIATE

KSC Release No. 3688-F

BALTIMORE AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION AWARD

KENNEDY SPACE CENTER, FLA. -- Edith C. Fulmore, 55 South Monastery, Baltimore, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. She teaches 1st and 2nd grade at Steuart Hill Elementary in Baltimore.

The NEWEST program is sponsored by NASA, and supported by the National Science Teachers Association (NSTA) and the National Council of Teachers of Mathematics (NCTM). Elementary teachers in grades 1 through 6 are selected to participate under procedures administered by NSTA. Awardees receive national recognition, with all expenses paid for the nine-day workshop.

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KSC Release No.3688-G

BOISE AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION AWARD

KENNEDY SPACE CENTER, FLA. -- Rick D. Gentry, 9355 Grandmason Place, Eagle, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. He teaches 4th grade at Pierce Park Elementary in Boise.

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KSC Release No. 3688-H

MERCED AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION AWARD

KENNEDY SPACE CENTER, FLA. -- David A. Ginsberg, 760 Yosemite Avenue, Merced, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. He teaches K through 8th grade at La Grange Elementary.

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KSC Release No. 3688-I

OVERLAND PARK AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION AWARD

KENNEDY SPACE CENTER, FLA. -- Ruth Ann Gleason, 7575 West 106th, Overland Park, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. She teaches 5th grade at Rolling Ridge Elementary in Olathe.

The NEWEST program is sponsored by NASA, and supported by the National Science Teachers Association (NSTA) and the National Council of Teachers of Mathematics (NCTM). Elementary teachers in grades 1 through 6 are selected to participate under procedures administered by NSTA. Awardees receive national recognition, with all expenses paid for the nine-day workshop.

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KSC Release No.3688-J

WATSONVILLE AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION
AWARD

KENNEDY SPACE CENTER, FLA. -- Ruth Margaret Landmann, 1050 Madison Street, Watsonville, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. She teaches 4th, 5th, and 6th grade at Hall District School.

The NEWEST program is sponsored by NASA, and supported by the National Science Teachers Association (NSTA) and the National Council of Teachers of Mathematics (NCTM). Elementary teachers in grades 1 through 6 are selected to participate under procedures administered by NSTA. Awardees receive national recognition, with all expenses paid for the nine-day workshop.

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KSC Release No. 3688-K

GLENDIVE AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION
AWARD

KENNEDY SPACE CENTER, FLA. -- Linda Layman, 409 North Meade Avenue, Glendive, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. She teaches 6th grade at Washington School.

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KSC Release No. 3688-L

ALGIERS AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION AWARD

KENNEDY SPACE CENTER, FLA. -- Albert S. Leclerc Jr., 1421 Shirley Drive, Algiers, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. He teaches 2nd and 3rd grade at Live Oak Manor in Waggaman.

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KSC Release No. 3688-M

HOUSTON AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION
AWARD

KENNEDY SPACE CENTER, FLA. -- Denise Lynn Martin, 12235 Paddock Way, Houston, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. She teaches 4th and 5th grade at T.S. Hancock Elementary.

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KSC Release No. 3688-N

OTTAWA AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION AWARD

KENNEDY SPACE CENTER, FLA -- Haniel Peterson, 830 South Mulberry, Ottawa, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. He teaches 2nd grade at Garfield Elementary.

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KSC Release No. 3688-0

RIVERTON AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION
AWARD

KENNEDY SPACE CENTER, FLA. -- Rosanne R. Seyler, 201 Lost Wells Butte Drive, Riverton, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. She teaches K through 3rd grade at Wind River Elementary in Pavillion.

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KSC Release No. 3688-Q

WICHITA AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION AWARD

KENNEDY SPACE CENTER, FLA. -- Diana L. Smith, 6601 East 11th, Wichita, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. She teaches 2nd grade at Allen Elementary.

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KSC Release No. 3688-P

DES MOINES AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION AWARD

KENNEDY SPACE CENTER, FLA. -- Karen Riley Sievers, 1800 Center Street, Des Moines, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. She teaches 6th grade at Callanan Middle School.

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KSC Release No.3688-R

EUREKA AREA TEACHER RECIVES NASA/NSTA ELEMENTARY EDUCATION AWARD

KENNEDY SPACE CENTER, FLA. -- Roberta Stoken, Eureka, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. She teaches 6th, 7th, and 8th grade at Eureka Elementary.

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KSC Release No.3688-S

PULLMAN AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION
AWARD

KENNEDY SPACE CENTER, FLA. -- Judith Marlene Tucker, Southwest 915 Mies, Pullman, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. She teaches 5th grade at Jefferson Elementary.

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KSC Release No. 3688-T

FALLS CHURCH AREA TEACHER RECEIVES NASA/NSTA ELEMENTARY EDUCATION
AWARD

KENNEDY SPACE CENTER, FLA. -- August Frattali, 3100 South Manchester Street, Falls Church, is one of 20 outstanding master teachers from around the country who have just completed the annual National Aeronautics and Space Administration (NASA) Education Workshops for Elementary School Teachers (NEWEST) program, held at Kennedy Space Center. He teaches 6th grade at Spring Hill Elementary in McLean, Virginia.

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Lisa Malone
Kennedy Space Center, Fla.
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For Release:

June 21, 1988

KSC Release No. 35-88

MILESTONE TO LAUNCH:

ORBITER DISCOVERY ROLLS OVER TO THE VEHICLE ASSEMBLY BUILDING

KENNEDY SPACE CENTER, Fla. -- A visible step leading to NASA's goal of launching the next Space Shuttle in August was accomplished today when the Orbiter Discovery was moved from its processing hangar to the Vehicle Assembly Building (VAB).

Discovery has been in the Orbiter Processing Facility undergoing extensive modifications and flight preparations since Oct. 30, 1986. Over 200 hundred modifications have been incorporated into Discovery's systems - many of which were accomplished during a six-month powered down period from February to August 1987. The orbiter was powered up Aug. 3, 1987 to checkout the electrical systems. Processing for the STS-26 mission began September 1987.

"Preparing Discovery for the upcoming mission has been an extraordinary challenge. Basically, every component of Discovery has been recertified for flight and the effort by the processing teams has been stupendous," said Tip Talone Discovery's flow director.

While in the VAB, Discovery will be connected to the external tank and solid rocket boosters, which are already bolted to the mobile launcher platform. A Shuttle Interface Test will be conducted in the next few days to verify the mechanical and electrical connections between the assembled vehicle elements.

Next week, the STS-26 vehicle stack will be rolled to Launch Pad 39-B where flight preparations will continue through launch.

Launch of Discovery on the STS-26 mission is planned for late August with a five-member veteran shuttle crew. The primary objective of the four-day mission is to deploy NASA's Tracking and Data Relay Satellite. The mission will culminate with a landing at the Dryden Flight Research Facility Edwards, Calif.

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Karl Kristofferson
(407) 867-2468

For Release:

June 16, 1988

KSC RELEASE NO. 34-88

HARRINGTON APPOINTED DIRECTOR, SHUTTLE OPERATIONS AT KSC

KENNEDY SPACE CENTER, Fla -- James F. Harrington has been appointed director, Space Shuttle Operations at Kennedy Space Center. Reporting to Tom Utsman, director of STS Management and Operations, he is responsible for the operational management of all prelaunch, landing and recovery operations for KSC Space Shuttle vehicles.

Harrington joined KSC in 1966, as a senior test supervisor on the Apollo Lunar Landing Program. He transferred to the Space Shuttle program in 1976, where he served as a senior test conductor in the Orbiter Processing Branch. In 1980, he became chief of the Orbiter/External Tank Processing Branch for missions STS-2 through STS-7. He also served as KSC's senior ground operations manager for orbiter landing and turnaround operations at Dryden Flight Research Facility and White Sands, New Mexico.

He was flow director for seven STS missions and alternate launch director during major integrated tests associated with these missions. He was named deputy director, Space Shuttle Operations in July 1986. As director, he replaces Charles D. Gay who recently retired from federal service.

Harrington received Certificates of Commendation in 1970 as lead test supervisor, Apollo, and again in 1982 for the STS-3 White Sands turnaround operation. He is the recipient of two Exceptional Service Medals -- one in 1971 for notable contributions to the success of Apollo 15, and in 1981 for STS-1.

He is a native of Greensboro, NC, and a graduate of the University of Miami, Coral Gables, Florida, where he earned a BS degree in electrical engineering.

Harrington resides with his wife, Jean, and two children in Melbourne, Florida.

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NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Lisa Malone
Kennedy Space Center, Fla.
(407) 867-2468

June 14, 1988

KSC News Release No. 33-88

MILESTONE TO LAUNCH:

STS-26 SOLID ROCKET BOOSTERS AND EXTERNAL TANK STACKING COMPLETED

KENNEDY SPACE CENTER, Fla. -- Elements for the STS-26 Space Shuttle vehicle are coming together in the Vehicle Assembly Building (VAB) in preparation for NASA's upcoming launch in August. Two important flight processing milestones have been accomplished in the last few weeks.

The most recent achievement occurred Friday, June 10, when workers stacked the 154-foot tall external tank with the solid rocket boosters on the mobile launch platform. The tank had been in its storage cell in the VAB where workers performed some modifications.

On May 28, workers completed stacking the redesigned solid rocket boosters. Stacking the STS-26 segments began March 28 and workers completed closing out the field joints prior to mating the external tank. A test to verify the connections between the external tank and the solid rocket boosters is scheduled in the next few days.

"The successful completion of these two important tasks is an indication of a tremendous performance by the government and contractor processing teams. It also represents an enormous amount of work that has occurred here in the last couple of months. There is a high level of confidence in the shuttle processing teams as we gear up for the operations in the coming weeks leading up to launch," said Shuttle Launch Director Robert Sieck.

Later this week, the Space Shuttle Discovery is scheduled to join the boosters and tank in the VAB. Many modifications have been made to Discovery to upgrade and/or improve its intricate systems for flight. After the shuttle is mated with the tank and boosters, the assembled vehicle elements are scheduled to be rolled out to the Launch Pad 39-B, currently planned for this month.

Three of the milestones scheduled at the pad prior to launch are the "wet" tanking test, the Flight Readiness Firing of Discovery's main engines and main propulsion system and installation of the payload.

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NASA News

National Aeronautics and
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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Pat Phillips
(407) 867-2468

June 10, 1988

KSC Release No. 32-88

STUDENT AEROSPACE RESEARCH SHOWCASED IN COCOA BEACH

KENNEDY SPACE CENTER, Fla. -- About 300 students from 35 universities across the nation will meet in Cocoa Beach, Fla. June 13 to 17 to present their solutions to aerospace problems such as designing reliable lunar ground transportation for astronauts assigned to a moon base.

The students' year-long research into various high-tech problems was sponsored by NASA through a unique Advanced Design Program managed by the Universities Space Research Association (USRA). Participation in the program is highly competitive. Projects selected for the program are paired with one of NASA's nine field centers, where specialists in the research field serve as advisors.

About 100 students from six universities have worked with Kennedy Space Center advisors during the past school year. The universities, projects, and NASA advisors and program offices involved at KSC include:

- University of Florida, Controlled Ecological Life Support System (CELSS), Dr. Bill Knott, Biomedical Operations and Research Office;

- University of Central Florida, Space Station refuse management, Greg Opresco, Space station office;

- Florida Institute of Technology, lunar launch and landing facilities, Dennis Matthews, Advanced Projects, Technology and Commercialization Office,

- Georgia Tech, construction equipment for a lunar base, Vince Cassisi, Design Engineering;

- Florida A&M/Florida State (joint project), lunar transportation system, Gene Rocque, STS Management and Operations.

Bruce Larsen of the Advanced Projects office is prime contact for the KSC-related research. Throughout the year, students had the opportunity to come to KSC to study on-going

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work, to do research, and to meet with advisors and engineers to prepare their project reports.

The experience encourages students to pursue careers in sciences, and allows them to translate textbook theory into actuality, Larsen explained. The NASA-university relationship also has long-term benefits for the space program, he added.

"Tomorrow's space projects are being developed in the universities today--and many of our next generation of engineers and scientists are getting a head start on meeting tomorrow's challenges," he said.

During the conference at the Howard Johnson Plaza, the students will present final reports on their projects and participate in workshops. Their visit will conclude with a tour of Kennedy Space Center.

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NOTE TO EDITORS: For more information on the USRA program, contact Carolynne P. Hopf at (713) 480-5939.

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Barbara Selby
Headquarters, Washington, D.C.
(Phone: 202/453-8536)

Dick Young
Kennedy Space Center, Fla.
(Phone: 407/867-2468)

NOTE TO EDITORS/ PROGRAM DIRECTORS

SHUTTLE MANAGERS TO BRIEF ON MISSION PREPARATIONS

Robert L. Crippen, deputy director, National Space Transportation System Operations, and Robert Sieck, the Kennedy Space Center's Shuttle launch director, will brief the news media on Space Shuttle flight preparations at 11 a.m. EDT on Friday, June 10, 1988.

Crippen also is chairman of the Mission Management Team (MMT) which functions during countdown and flight as a program level oversight group to review status of the countdown and flight activities. During the Friday briefing, Crippen will review the manner in which the MMT will operate during launch countdown and in-flight activities and discuss the integrated launch simulation held earlier in the week.

Sieck will outline the status of preparations for the STS-26 mission now scheduled for late August.

The briefing will originate from the KSC news center and will be carried on NASA Select television (Satcom F2R, transponder 13, 72 degrees west longitude). with two-way question and answer capability.

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NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

James Ball
Headquarters, Washington, D.C.
(Phone: 202/453-8604)

June 9, 1988

Pat Phillips
Kennedy Space Center, Fla.
(Phone: 407/867-2468)

RELEASE: 88-76

NASA AND AMERICAN CANCER SOCIETY ANNOUNCE JOINT RESEARCH PROJECT

NASA and the American Cancer Society announced today a joint research project which they hope will boost survival odds for victims of the disease.

Officials at NASA's Kennedy Space Center in Florida and of the Florida Division of the American Cancer Society said the project involves a search for ways to improve laboratory identification and monitoring of cancer cells. The project name is "Evolution in Flow Cytometry: Application, Design and Testing of a New Advanced System."

In the cytometry process, specimen cells are marked with a fluorescent dye, suspended in a liquid solution, and identified or measured with the use of sophisticated lasers and multiple photometers. Researchers involved in the NASA/ACS research hope to develop an advanced flow cytometry instrument that could support biomedical experiments aboard the Space Station while advancing medical knowledge in cancer detection and treatment.

Among the projected cancer-fighting benefits are:

- * improved monitoring of the effectiveness of a cancer patient's treatment by evaluating the specific change in cancer cells resulting from chemotherapy or bone marrow transplants, and
- * selection of the most effective therapy for each patient by laboratory testing of diseased cells against various modes of treatment.

- more -

NASA will provide technical leadership for the ACS research in conjunction with a "Space Station In-Flight Cytometry Project" at Johnson Space Center, Houston. Dr. Gerald Taylor, JSC Science Manager for the Space Station Biology Project, developed the NASA cytometry project and is a co-investigator for the joint project. Both the NASA life sciences and technology utilization programs have planned a combined budget of \$230,000 for the JSC cytometry project in FY 1989.

Overall management of the NASA/KSC collaboration process will be provided by the KSC Technology Utilization Office. Robert L. Butterfield, manager, technology integration, will serve as project liaison with the ACS.

Project co-investigators Dr. David S. Robinson and Dr. Awtar S. Krishan will lead research efforts at the University of Miami in Florida. Other researchers include Dr. Scott Cram and Dr. Tudor Bulcan at the Los Alamos Flow Cytometry National Laboratory in Los Alamos, N.M., and Dr. Mack Fulwyler at the University of California, San Francisco.

The ACS, Florida Division, is expected to provide approximately \$88,000 in support funding for Phase I and Phase II of the project through 1989. Project review will be coordinated through a scientific committee headed by Dr. Woody York of Tampa, Fla. The committee selected this project from 19 others submitted for NASA/ACS collaboration.

The joint project is one of many NASA-private sector efforts supported by NASA's technology utilization program. Such collaborations are intended to transfer knowledge acquired through the space program into diverse fields and thereby, stimulate "spinoff" applications leading to a wide range of benefits for everyday life.

Previous spinoffs from NASA research and technology have led to health care applications such as:

- * a programmable insulin pump for diabetics,
- * a vision screening program for children,
- * new ways to help the hearing-impaired learn to speak,
- * progress in the fight against heart disease through use of an image processing system used to diagnose coronary artery problems, and
- * a device that helps prevent hair loss in cancer patients undergoing chemotherapy.

This release and other NASA information is available electronically through DIALCOM, INC. For access to NASA NEWS through this system, contact the NASA NEWS representative, DIALCOM, INC. at 202/488-0550.

NOTE TO EDITORS: For more information about the American Cancer Society scientific committee, involvement in cytometry studies, and ACS efforts in research and education, contact Jane Birkhold, Public Information Director, American Cancer Society, 1001 S. MacDill Avenue, Tampa, Fla., 33629, phone (813) 253-0541.

B/W or color photographs are available from the NASA KSC Newsroom.

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Lisa Malone
Kennedy Space Center, Fla.
(407) 867-2468

June 6, 1988

KSC Release No. 31-88

NOTICE TO EDITORS/NEWS DIRECTORS:

LAUNCH SIMULATION TO EXERCISE LAUNCH, FLIGHT AND MANAGEMENT TEAMS

KENNEDY SPACE CENTER, Fla. -- An integrated Space Shuttle launch simulation to be conducted here on Tuesday, June 7, is designed to fully test the coordination of functions between the Mission Management Team and the launch, flight and support teams.

The Mission Management Team, chaired by Robert Crippen, Space Transportation System deputy director for Operations, will function during launch countdown and during flight as a program level oversight group to review status of the countdown and flight activities. The team will also be responsible for making decisions associated with launch countdown and in-flight activities.

Launch teams will report to the Launch Control Center's Firing Rooms 1 and 2 at 6 a.m. (EST) for the call-to-stations. The simulated countdown will begin at the T minus three hour mark planned at 6:30 a.m. (EST). The countdown will proceed through liftoff and will include a simulated Return-To-Launch-Site Abort to exercise the teams.

This simulation will involve hundreds of personnel at KSC; the Johnson Space Center, Houston, Tex.; the Marshall Space Flight Center, Huntsville, Ala.; Goddard Space Flight Center, Greenbelt, Md.; and the Dryden Flight Research Facility, Edwards, Calif.

For the purposes of the simulation, video clips of previous countdown, launch and landing activities will be shown on NASA Select Television and public affairs commentary will be provided beginning at 6:30 a.m. (EST). Satellite coverage of the simulation is available on Satcom F-2R, transponder 13, C-band, orbital position 72 degrees west longitude. Commentary will also be available on the V-2 telephone circuits (867-1220, -1240 and -1260).

- more -

The KSC News Center will open at 6:30 a.m. to permit press coverage of the simulation. Media representatives without permanent credentials should contact the News Center at area code 407/867-2468 to arrange clearance.

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NASA News

National Aeronautics and
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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



Dick Young
Area Code 407/867-2468

For Release:
June 8, 1988

KSC RELEASE NO. 30-88

NOTICE TO EDITORS/NEWS DIRECTORS:

SHUTTLE MANAGERS TO BRIEF PRESS ON MISSION PREPARATIONS JUNE 10

KENNEDY SPACE CENTER, Fla. - Robert L. Crippen, deputy director, National Space Transportation System Operations, and Robert Sieck, the Kennedy Space Center's shuttle launch director, will brief the news media on Space Shuttle flight preparations at 11 a.m. on Friday, June 10.

The briefing will be conducted at the KSC News Center and be carried by NASA Select Television to NASA Headquarters and other NASA centers. There will be a two-way, question and answer capability for those participating at remote sites.

Crippen is also chairman of the Mission Management Team which functions during countdown and flight as a program level oversight group to review status of the countdown and flight activities. The team is responsible for making key management decisions associated with launch countdown and in-flight activities.

An integrated launch simulation was held on Tuesday, June 7, to test the coordination of MMT functions with launch, flight and support teams. During the Friday briefing, Crippen will review the manner in which the MMT will operate during launch countdown and in-flight activities and discuss the simulation held earlier in the week.

Sieck will outline the status of preparations for the STS-26 mission, now scheduled for late August. The erection of the solid rocket boosters on a mobile launch platform in the Vehicle Assembly Building has been completed, mating of the external tank is scheduled this week and preparations are underway for the rollover of the orbiter Discovery to the VAB later this month to complete the STS-26 "stack."

The news conference will be carried on the V-2 circuit, which may be reached by Dialing Area Code 407/867-1220/1240 or 1260. Media representatives without permanent credentials should call Area Code 407/867-2468 to arrange for access.

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NASA News

National Aeronautics and
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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Diana Boles
(407) 867-2468

Immediate

KSC RELEASE NO. 29-88

INTERNATIONAL STEEL INDUSTRIES, INC. WINS KSC CONTRACT

KENNEDY SPACE CENTER, Fla. -- NASA's John F. Kennedy Space Center has awarded a \$358,300 contract to International Steel Industries, Inc., Orlando, Fla., to replace two air handling units located on the roof of the Central Instrumentation Facility and remove all other outdated heating, ventilating and air-conditioning systems that are no longer used.

Located in KSC's Industrial Area, the twenty-year old facility is the heart of the Spaceport's instrumentation and processing operations. It provides instrumentation to receive, monitor, process, display and record information received from space vehicles during test, launch, flight and landing.

The fixed-price contract, one set aside for award to a small business, requires the contractor to complete all work within 180 days after notice to proceed.

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June 3, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Sarah Keegan
Headquarters, Washington, D.C.
(Phone: 202/453-2351)

June 2, 1988

Lisa Fowler
Kennedy Space Center, Fla.
(Phone: 407/867-2468)

EDITORS NOTE: NASA ACCREDITATION REQUESTS FOR STS-26 MISSION.

NASA is accepting accreditation requests for news media to cover the Space Shuttle Discovery mission (STS-26) currently targeted for launch in August.

Requests for accreditation must be made by a supervisory official other than the applicant on company letterhead, clearly indicating the assignment (reporter, photographer, technician, etc.) and social security number of each individual. Freelance writers and photographers must offer proof of assignment or evidence of professional activity. The accreditation will be valid for all NASA news centers.

Requests should be submitted no later than 30 days before launch to:

NASA, John F. Kennedy Space Center
PA-PIB Accreditation
Kennedy Space Center, Fla. 32899

Please indicate from which NASA location(s) you plan to cover the mission. The news center will open at Kennedy 5 days prior to launch, at the Johnson Space Center, Houston, 3 days before launch and at the Dryden Flight Research Facility, Edwards, Calif., 1 day prior to launch.

NASA ground rules for newsmen covering the mission are:

- o NASA can make no travel or housing arrangements.

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o Only working newsmen will be accredited at the news centers. Publishers and other news and advertising executives will not be accredited. These individuals should apply to NASA Public Services Division (LP), NASA Headquarters, Washington, D.C. 20546.

o Friends, dependents or relatives not covering the mission will not be accommodated. Special arrangements can be made only at the Kennedy news center for dependents to view the launch at a special dependent's site.

o No one under 16 years of age will be allowed at the press site under any circumstances. Violation of this rule will result in cancellation of press site privileges for responsible parties.

o Philatelic publications must meet the criteria of general publications or be national publications of recognized philatelic organizations. Representatives of catalogs, newsletters, local clubs or profit seeking projects will not be accredited. Conducting philatelic business, other than reporting, will not be tolerated.

o College news media are limited to two accredited correspondents.

o You must present your letter of acceptance and a photo identification to obtain a news badge at the appropriate center.

o Violation of the rules will result in the loss of press badges and press site privileges.

NASA News

National Aeronautics and
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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Diana Boles
(407) 867-2468

Immediate

KSC RELEASE NO. 28-88

ROCKLEDGE FIRM WINS PAVING CONTRACT AT KENNEDY SPACE CENTER

KENNEDY SPACE CENTER, Fla. -- NASA's John F. Kennedy Space Center has awarded a \$450,950 contract to Butler Construction Company, Rockledge, Fla., to repave several miles of eastbound lanes on NASA Causeway from Gate #3 near U.S. Highway 1 to the Kennedy Parkway (State Road 3), including a 600-foot down ramp adjacent to the Causeway.

The contract also provides for the extension of an eastbound acceleration and deceleration turnoff lane, in addition to the painting of traffic stripes.

The fixed-price contract, one set aside for award to a small business, requires Butler Construction Company to complete all work within 90 days after notice to proceed.

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June 1, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

James Ball
Headquarters, Washington, D.C.
(Phone: 202/453-8604)

May 27, 1988

Pat Phillips
Kennedy Space Center, FL
(Phone: 407/867-2468)

RELEASE: 88-68

NASA INVITES EXPRESSIONS OF INTEREST FOR USE OF EXTERNAL TANKS

The National Aeronautics and Space Administration today invited the U.S. private sector to express interest in commercially using the Space Shuttle's jettisoned external tanks.

An announcement published in today's edition of Commerce Business Daily asks interested American companies and non-profit organizations to submit information concerning proposed uses for the tanks and associated technical and financial information, within 90 days, to NASA's Office of Commercial Programs, Washington, D.C.

The notice is the first step towards implementing one of the specific actions included in the President's recently announced Space Policy and Commercial Space Initiative. The decision to make available, for a period of 5 years, the expended external tanks of the Shuttle fleet for feasible U.S. commercial and non-profit endeavors is intended to help promote a strong U.S. commercial presence in space.

NASA is asking interested companies and organizations to identify their specific proposed use of an initial external tank, the expected government/private sector market to be served, the total number of tanks required to meet that market, and implications to ongoing NASA activities.

Those expressing an interest in use of a tank in orbit must also provide information concerning the planned approach to on-orbit safety and the safe disposition of the tank when it eventually reenters Earth's atmosphere.

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NASA News

National Aeronautics and
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John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Jim Cast
Headquarters, Washington, D.C.
(Phone: 202/453-2352)

May 23, 1988
4 P.M. EDT

Bud Littin
NOAA, Washington, D.C.
(Phone: 202/377-8090)

Mary Ann Peto
Lewis Research Center, Cleveland
(Phone: 216/433-2902)

George Diller
Kennedy Space Center, Fla.
(Phone: 305/867-2468)

RELEASE: 88-66

COMMERCIAL LAUNCH SERVICES CONTRACT AWARDED GENERAL DYNAMICS

NASA and the Department of Commerce have awarded a firm, fixed-price, \$200,236,553 contract to General Dynamics Space Systems Division, San Diego, Calif., for expendable launch vehicle (ELV) transportation services for the Department's National Oceanic and Atmospheric Administration (NOAA).

Consistent with the provisions of the President's recent National Space Policy, this contract is the first U.S. Government procurement of commercial launch transportation services and ushers in a new era in the commercialization of space.

Under this initial, multi-year contract, General Dynamics will supply Atlas/Centaur launch transportation services for NOAA's new family of Geostationary Operational Environmental Satellites (GOES) I, J and K, with an option of \$103,700,000, subject to appropriate economic price adjustment, for GOES L and M. NASA's Lewis Research Center, Cleveland, will manage the contract.

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In a joint statement, NASA's Associate Administrator for Space Flight, RADM Richard H. Truly, and NOAA's Assistant Administrator for Satellite and Information Services, Thomas N. Pyke, Jr., said, "NASA and the Department of Commerce are proud to make aerospace history with the initiation of commercial launch services."

This contract marks the first time in which a contractor will assume systems performance responsibility for overall program and subcontractor management; vehicle design, production, testing and vehicle-to-payload integration; mission integration; launch services; system effectiveness; overall launch vehicle performance; and mission success.

GOES spacecraft provide near-continuous, high-resolution visible and infrared imaging of weather systems over large areas of the Earth. They are especially valuable in identifying hurricanes at an early stage and other major storms and in providing critical data needed on a routine basis for weather forecasting. GOES I, first of the new series of weather satellites, is targeted for launch in March 1990.

Work will be performed at General Dynamics Space Systems Division, San Diego, Calif., and Harlingen, Texas; the Western Space and Missile Center, Calif.; and the Eastern Space and Missile Center, Fla. Subcontractors to General Dynamics are: Rockwell International, Rocketdyne Division, Canoga Park, Calif.; United Technologies, Pratt and Whitney, West Palm Beach, Fla.; Honeywell Inc., Avionics Division, Clearwater, Fla.; Teledyne Systems Company, Northridge, Calif.; Gulton Data Systems Division, Albuquerque, N.M.; and Cincinnati Electronics, Ohio.

In a related matter, NASA's Kennedy Space Center, Fla., recently has entered into an agreement with General Dynamics which allows the company to use NASA Launch Complex 36 and associated facilities for commercial launch operations of the Atlas/Centaur rocket.

The agreement covers the terms and conditions for the operation and maintenance of the facilities by General Dynamics and the use of payload processing facilities where appropriate.

Under terms of the agreement, signed March 31, 1988, General Dynamics agrees to pay all costs associated with facility maintenance and operation. On April 1, 1988, General Dynamics assumed operation of the pad.

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

May 13, 1988

George H. Diller
KSC News Center
Telephone: 407/867-2468

Release No. 26 - 88

NOTICE TO EDITORS/NEWS DIRECTORS:

TDRS-C PRESS BRIEFING/SATELLITE VIEWING SCHEDULED FOR MAY 19

Kennedy Space Center, Fla. -- The primary satellite payload to be launched on the STS-26 Space Shuttle mission in August will be the topic of a press briefing held in association with a viewing of the spacecraft.

TDRS-C, the Tracking and Data Relay Satellite to be deployed from Discovery, is to relay data from low earth orbiting spacecraft and air-to-ground voice communications and television from Space Shuttle orbiters when it becomes operational.

The event will begin at 1 p.m. Eastern time on Thursday, May 19 at the KSC News Center auditorium. Participating in the briefing will be Charles M. (Chuck) Hunter, TDRS deputy project manager, Goddard Space Flight Center; Parker V. Counts, manager, upper stage projects office, Marshall Space Flight Center; Col. Dennis E. Beebe, director upper stages program, U.S. Air Force Space Division; and P. Thomas (Tom) Breakfield III, director STS payload operations, Kennedy Space Center.

After the event news media representatives will be escorted to the high bay of the Vertical Processing Facility in the KSC Industrial Area to view the satellite undergoing pre-launch preparation.

Because of the spacecraft's susceptibility to certain contaminants, those attending the showing are asked to refrain from using hairspray or makeup on the day of the event. Also, long pants and close-toed shoes will be required to gain access to the clean room area. White room attire will be provided.

- more -

No flame producing devices can be allowed in any part of the Vertical Processing Facility. Available light only may be used for photography. All equipment should have internal power.

A confirmation of attendance is necessary for this event. The KSC News Center should be contacted by noon on Wednesday, May 17 at 407/867-2468.

The briefing will be carried by the NASA Select satellite television system on Satcom F-2R, transponder 13, located at 72 degrees West. Audio will also be available on the V-2 circuit which may be accessed directly by dialing Area Code 407/867-1220/1240/1260.

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NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:
May 10, 1988

George H. Diller
KSC News Center
Telephone: 407/867-2468

Release No. 24-88

NOTE TO EDITORS: TDRS-C TO ARRIVE AT KENNEDY SPACE CENTER MAY 16

KENNEDY SPACE CENTER, Fla.-- TDRS-C, the Tracking and Data Relay Satellite which will be the primary payload to be launched aboard the Space Shuttle Discovery on STS-26 in August, will soon begin final pre-launch processing at KSC.

Transportation from the TRW plant in California will be provided by military aircraft. Arrival on Cape Canaveral Air Force Station is anticipated at approximately 7:30 a.m., Monday, May 16.

A photo opportunity will be available for press members wishing to cover the arrival of the aircraft and the subsequent offloading of the TDRS-C shipping container.

For those wishing to be present, a bus will leave the KSC News Center for the Skid Strip on Cape Canaveral Air Force Station at 7 a.m. Media representatives needing accreditation should contact the KSC News Center no later than Friday, May 13 at 407/867-2468.

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NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Mitch Varnes
Area Code 407/867-2363

Immediate

KSC Release No. 23-88

ANDY WARHOL WORKS TO GO ON PERMANENT DISPLAY AT SPACEPORT USA

KENNEDY SPACE CENTER, Fla. - "Moonwalk," a two-picture set of silkscreen art work created by renowned pop artist Andy Warhol, will go on permanent display at Spaceport USA, the Kennedy Space Center's visitor complex, beginning May 16.

The two prints - both of which depict Apollo 11 astronaut Edwin "Buzz" Aldrin standing on the surface of the moon - are the first of a series of works in which Warhol was involved at the time of his death in February 1987.

The distinctive prints - from a limited edition of 160 copies - are identical in subject yet distinctive in color. One is painted a canary yellow while the other is a bold fuschia.

"NASA is very pleased to gain the Warhol works," said Arnold I. Richman, KSC's chief of visitors services. "These fine pieces of art add even more prestige to NASA's acclaimed art collection."

The Warhol works will be displayed in the center core of Spaceport USA's Galaxy Center, adjacent to more than 250 other pieces of art - the world's largest collection of space art - which are located inside Spaceport USA's art gallery.

Spaceport USA is Florida's fourth most popular tourist attraction and draws more than two million visitors annually. It is operated by TW Recreational Services Inc. under a concession agreement with NASA.

A nominal fee is charged for bus tours and for the IMAX film, "The Dream Is Alive," but actual spaceflight hardware, audio-visual programs, NASA and contractor-sponsored exhibits, and other space memorabilia are on display at no charge. Spaceport USA is open to the public every day of the year with the exception of Christmas.

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May 11, 1988

NASA Fact Sheet

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 305 867-2468

For Release:

KSC Release No. 22-88

May 1988

CHANGES TO THE EMERGENCY EGRESS SYSTEM AT PAD 39-B

A number of modifications have been made to the emergency egress system at Launch Pad 39-B to increase the margins of personnel safety.

Two baskets have been added to the 195-foot level of the Launch Pad Fixed Service Structure. Previously, there were five baskets rated to hold four people weighing an average of 190 pounds. Officials decided that the maximum individual weight rating was not sufficient and increased it to 220 pounds per person, which takes into account the weight of life-support apparatus, such as air tanks, which escapees are likely to be wearing. Considering the bulk of the life-support apparatus, officials also have decided that the baskets will be rated to hold three people each instead of four, and will have a nominal operating weight capacity of 660 pounds. However, four people will be permitted if necessary. The maximum carrying capacity of each basket is 880 pounds.

The baskets were modified at KSC's Launch Equipment Shop. A side exit to the basket was incorporated, a flame-protective covering was added over the existing webbed material and an anti-roll-back brake was added to ensure the basket comes to rest as quickly as possible.

The braking mechanism for the baskets consists of a series of increasing-density steel chains that drag through the sand in the landing zone, decelerating the basket to a final stop. The new brake holds the baskets at their furthest extent of travel. Before, the baskets would stop temporarily and then begin to move backwards before coming to a complete stop.

A rope arresting net at the end of the slidewire provides a redundant stopping point for the basket in the unlikely event the deceleration system fails. At the stopping point, personnel exit through the side opening.

-more-

The basket will hang approximately 2-3 feet off the ground. The stainless steel sidewires will be restrained against vertical movement to limit the variance in basket height as occupants exit.

Upon exiting, the crew members will make a decision as to whether to enter armored personnel carriers and drive to safety, or to enter an underground concrete bunker. A new underground, steel-reinforced concrete bunker was built and provides easier access. The bunker's roof is 1-foot thick and the walls are 15-inches thick. It is 20-feet long by 13.4-feet wide, and is located just to the south of the slidewire basket termination area.

The bunker contains emergency air for breathing, an emergency shower, a telephone and four fold-down bunks. It features a five-foot-wide roll-up door in addition to a standard swing door. The roll-up door will be open during the final launch countdown for easier access in the bunker.

Fire-protection plating was added to the Orbiter Access Arm and on the 195-foot level of the Fixed Service Structure (FSS). Previously, there was an open-grate floor, as used on the rest of the pad levels. It is from this level that the crew enters and exits the Space Shuttle.

Additional fire detectors have been installed on the FSS to provide better coverage on the 195-foot level and the Orbiter. The fire water spray system also has been upgraded for better coverage on the egress paths.

The lighting has been upgraded on the 195-foot level of the FSS and at the slidewire landing area in the case of a night emergency. Emergency procedures and documents also have been revised.

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

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Diana Boles
Phone: (407) 867-2468

For Release:

Immediate

KSC RELEASE NO. 19-88

STANFORD UNIVERSITY AND NASA RENEW COOPERATIVE RESEARCH AGREEMENT

KENNEDY SPACE CENTER, Fla. -- NASA's John F. Kennedy Space Center has renewed a cooperative agreement valued at \$525,556 with Stanford University, Stanford, Calif., to continue with research on data communications and data base networking. The study is entitled "Space Systems Integration and Operations Research Applications."

Information gained from this research will provide the technology to develop a paperless management system on the alignment procedure for the replacement of space shuttle tiles during post-flight maintenance and inspection. It will eliminate the time-consuming method that is now being done by hand. The new Tile Automation System is being designed to allow technicians to speak directly into a programmed computer terminal that will fill out the paperwork electronically.

Precise alignment of the tiles is important to assure the orbiter's safe re-entry into the atmosphere. A rough surface or unevenly spaced tiles can increase friction and prevent the thermal protection system from working properly.

The research is being conducted at Stanford University for the next six months. The cumulative amount of the cooperative agreement between NASA and Stanford University is \$1,775,556.

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April 27, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Pat Phillips
Kennedy Space Center, Fla.
(407) 867-2468

April 20, 1988

KSC News Release No. 18-88

UNIQUE 'BON VOYAGE' FROM KSC WORKERS WILL BOOST DISCOVERY LAUNCH

KENNEDY SPACE CENTER, Fla. -- When Discovery soars into space on the STS-26 mission this summer, it will carry the world's most unique autograph book.

Flying with the astronauts will be a tangible reminder of the loyalty and pride of the KSC launch team: the signature of every KSC employee.

Bearing the slogan "The KSC team is with you from liftoff to landing," the volume is the brainchild of John Archibald, a management systems analyst for Lockheed Space Operations Co., which manages the prime Shuttle Processing Contract.

Archibald said he got the idea when the STS-26 crew visited KSC workers in 1987 as part of the employee Manned Flight Awareness program.

"They said they wished we could all go with them. We can't all actually go--but we can go symbolically," Archibald said.

KSC Center Director Forrest McCartney provided the first signature in kickoff ceremonies March 28.

"This is a slick idea," McCartney exclaimed. He added "if you think enough of something to sign your name on it, you think enough of it to make it go."

More than 15,000 signatures are being collected from NASA and contractor employees. Since the entire volume must weigh under two pounds, the space for each signature has been carefully calculated, said Don Beck, Lockheed Human Resources Development manager.

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"We actually had to figure out how many signatures per page, and how much each page weighed in order to confirm we could meet the weight requirement," Beck explained.

The unique autograph collection provides a person-to-person link between the KSC launch team and the astronauts they support.

"This says that we believe in the program, and we want the astronauts to know that we're there with them, that they have our total support," Archibald declared.

Plans for presentation of the volume to the STS-26 crew will be announced later.

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NOTE TO EDITORS: A b/w photo is available through the KSC NASA News Center. The reference number is KSC-88PC-182.

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468

Raymond R. Corey
Tel. (305) 867-4444
KSC Release No. 17-88-1

For Release:
IMMEDIATE

KSC HONORS 46 EMPLOYEES

KENNEDY SPACE CENTER, FL - Forty-six Kennedy Space Center civil service and contractor employees will be honored at a special Honoree Event, to be held April 12-14, at the Johnson Space Center, Houston, Texas.

The KSC employees are among some 260 NASA and industry employees from around the country who will be honored by top NASA and industry leaders for their significant contributions to improve the nation's space program, including current efforts to return the Space Shuttle to flight status.

The Honorees will attend a special reception in their honor at Brady's Landing in Houston, where they will be joined by astronauts and senior NASA industry officials of the National Space Transportation System team. They will also tour Johnson Space Center facilities and participate in various briefings and seminars:

The Honoree Award is the highest form of recognition bestowed upon an employee by the NASA Manned Space Flight Awareness Program. "These individuals are selected for their professional dedication and outstanding achievement in support of the manned space flight program," said KSC's Raymond R. Corey, Chief of the Education and Awareness Branch of Public Affairs.

Ten KSC civil service employees will be honored at the ceremony. They are Susan Campbell, Estelle Coleman, Lisa Fowler, Delores Green, Helen LaCroix, Robert Libbey, Sandra Loucks, Lounette Price, Russell Romanella, Ping Yuen Yu.

Contractor employees to be honored—USBI Booster Production Company, Inc.: Shirley Brewer, Gerald Powell, James Wandless; EG&G: David Brant, Richard Dugan, Louise Gerlach, George Hoggard, Mac McDaniel, Marilyn Meyer, John Newberry, Stanley Wellington; CSC: Janice Bird, Timothy Clinger; McDonnell Douglas Astronautics Company-KSC: Richard Taylor, Bret McAfee, George Berry, Ann Hunt, Richard Washington; Martin Marietta: Harold Woods; Rocketdyne: Roy Austin; Rockwell: Catherine Greever, Conrad Perez; TW Recreational Services, Inc.: Billy Ridgill; and Lockheed Space Operations Company: Jackie Cabe, Meri Cheatham, Bruce Chesson, Roy Chipley, Hector Garcia, Harold Gray, Zack Hinckley, Robert Lawhead, Raymond Monshor, William Orr, Ronald Ralph, Forrest Rooker, Patricia Stratton, Roberta Wyrick.

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April 4, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
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Raymond R. Corey
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KSC Release No. 17-88-2

For Release:
IMMEDIATE

ESTELLE G. COLEMAN HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Estelle G. Coleman of Sorrento, Florida, and a graduate of Seminole High School, Sanford, Florida, is among 46 employees at the Kennedy Space Center who are being honored for their roles in exemplary work at the nation's spaceport.

Coleman, who was born in Sanford, Florida, attended Brevard Junior College majoring in Business Administration.

The 46 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned flight space program, including the current work underway to return the Space Shuttle to flight status.

The Honorees will be given a VIP tour of the Johnson Space Center in Houston, Texas, and have been invited to attend a special reception in their honor at Brady's Landing, also in Houston. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Coleman's responsibilities at KSC involve monitoring the facility maintenance and custodial services as a NASA Technical Representative.

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April 8, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
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Raymond R. Corey
Tel. (305) 867-4444
KSC Release No. 17-88-3

For Release:
IMMEDIATE

LOUNETTE MATHIS PRICE HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Lounette Mathis Price daughter of Ina C. Mathis of Nashville, Georgia, and a graduate of Nashville High School, is among 46 employees at the Kennedy Space Center who are being honored for their roles in exemplary work at the nation's spaceport.

Price who was born in Berrien County, Georgia, is a member of the Space Coast Chapter of the Federally Employed Women and the American Business Women Association.

The 46 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned flight space program, including the current work underway to return the Space Shuttle to flight status.

The Honorees will be given a VIP tour of the Johnson Space Center in Houston, Texas, and have been invited to attend a special reception in their honor at Brady's Landing, also in Houston. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Price, whose work at KSC involves implementing and maintaining an effective Directorate level administrative program, is married to Thomas J. Price. They have three children and make their home in Rockledge, Florida.

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April 8, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
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Raymond R. Corey
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KSC Release No. 17-88-4

For Release:
IMMEDIATE

HELEN R. LACROIX HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Helen R. LaCroix daughter of Frances and Chester Robertson of Titusville, Florida, and a 1960 graduate of Eustis High School, Eustis, Florida, is among 46 employees at the Kennedy Space Center who are being honored for their roles in exemplary work at the nation's spaceport.

LaCroix, who was born in Ocala, Florida, graduated from the University of Central Florida in 1977 majoring in Computer Sciences.

The 46 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned flight space program, including the current work underway to return the Space Shuttle to flight status.

The Honorees will be given a VIP tour of the Johnson Space Center in Houston, Texas, and have been invited to attend a special reception in their honor at Brady's Landing, also in Houston. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

LaCroix, whose work at KSC involves monitoring compliance of contractors with new technology and patents, is married to Wallace (Ace) LaCroix. They have two children and make their home in Titusville, Florida.

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April 8, 1988

NASA News

National Aeronautics and
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KSC Release No. 17-88-5

For Release:
IMMEDIATE

SANDRA L. LOUCKS HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Sandra L. Loucks daughter of Arlene and Hugh Burley, and a 1978 graduate of Marion Central School, Marion, New York, is among 46 employees at the Kennedy Space Center who are being honored for their roles in exemplary work at the nation's spaceport.

Loucks, who was born in Brockport, New York, graduated from the State University of Alfred, Alfred, New York, majoring in Medical Laboratory Technology.

The 46 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned flight space program, including the current work underway to return the Space Shuttle to flight status.

The Honorees will be given a VIP tour of the Johnson Space Center in Houston, Texas, and have been invited to attend a special reception in their honor at Brady's Landing, also in Houston. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Loucks, whose work at KSC involves aerospace quality and reliability requirements, is married to Richard F. Loucks. They have two children and make their home in Merritt Island, Florida.

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April 8, 1988

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KSC Release No. 17-88-6

For Release:
IMMEDIATE

DELORES M. GREEN HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Delores M. Green daughter of Mrs. Enola Abraham of Bréaux Bridge, Louisiana, and a 1967 graduate of George Washington Carver High School in Breaux Bridge, Louisiana, is among 46 employees at the Kennedy Space Center who are being honored for their roles in exemplary work at the nation's spaceport.

Green, who was born in Lafayette, Louisiana, graduated from Brevard Community College in 1980 majoring in Business Administration.

The 46 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned flight space program, including the current work underway to return the Space Shuttle to flight status.

The Honorees will be given a VIP tour of the Johnson Space Center in Houston, Texas, and have been invited to attend a special reception in their honor at Brady's Landing, also in Houston. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Green, who is the Executive Secretary to the Associate Deputy Director of KSC, is married to Eric Green. They have one child and make their home in Titusville, Florida.

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April 8, 1988

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KSC Release No. 17-88-7

For Release:

IMMEDIATE

LISA A. FOWLER HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Lisa A. Fowler daughter of William and Mary Klumpp of Merritt Island, Florida, and a 1981 graduate of Merritt Island High School, is among 46 employees at the Kennedy Space Center who are being honored for their roles in exemplary work at the nation's spaceport.

Fowler, who was born in Lakeland, Florida, attended Brevard Community College majoring in Office Technology.

The 46 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned flight space program, including the current work underway to return the Space Shuttle to flight status.

The Honorees will be given a VIP tour of the Johnson Space Center in Houston, Texas, and have been invited to attend a special reception in their honor at Brady's Landing, also in Houston. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Fowler, who serves as Secretary to the Chief, Public Information, with NASA Public Affairs, is married to Terry Fowler. They make their home in Cocoa, Florida.

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April 8, 1988

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National Aeronautics and
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Kennedy Space Center, Florida 32899
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Raymond R. Corey
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KSC Release No. 17-88-8

For Release:
IMMEDIATE

GEORGE H. HOGGARD HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - George H. Hoggard son of Mrs. F. M. Hoggard of Norfolk, Virginia, and a graduate of Maury High School, is among 46 employees at the Kennedy Space Center who are being honored for their roles in exemplary work at the nation's spaceport.

Hoggard, who was born in Norfolk, Virginia, graduated from Brevard Community College majoring in Fire Science.

The 46 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned flight space program, including the current work underway to return the Space Shuttle to flight status.

The Honorees will be given a VIP tour of the Johnson Space Center in Houston, Texas, and have been invited to attend a special reception in their honor at Brady's Landing, also in Houston. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Hoggard, whose work at KSC involves flight crew rescue and all fire rescue services training with EG&G Florida, Inc., is married to Carol Aiello Hoggard. They have three children and make their home in Titusville, Florida.

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April 8, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
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Raymond R. Corey
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KSC Release No. 17-88-9

For Release:
IMMEDIATE

JOHN L. NEWBERRY HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - John L. Newberry son of Susie Margaret Newberry of Cocoa, Florida, and a graduate of Desoto County High School, Arcadia, Florida, is among 46 employees at the Kennedy Space Center who are being honored for their roles in exemplary work at the nation's spaceport.

Newberry, who was born in St. Petersburg, Florida, served in the U.S. Air Force from 1962-1966.

The 46 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned flight space program, including the current work underway to return the Space Shuttle to flight status.

The Honorees will be given a VIP tour of the Johnson Space Center in Houston, Texas, and have been invited to attend a special reception in their honor at Brady's Landing, also in Houston. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Newberry, whose work at KSC involves storage, issue and inventory of all supplies and materials for the Base Operations Contract for EG&G Florida, Inc., is married to Peggy Ann Walston. They have one child, and make their home in Cocoa, Florida.

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April 8, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
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Raymond R. Corey
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KSC Release No. 17-88-10

For Release:
IMMEDIATE

STANLEY J. WELLINGTON HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Stanley J. Wellington son of James Wellington of Hopewell, Virginia, and a graduate of Hopewell High School, is among 46 employees at the Kennedy Space Center who are being honored for their roles in exemplary work at the nation's spaceport.

Wellington, who was born in Hopewell, Virginia, graduated from the California University of Advanced Studies with an MBA.

The 46 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned flight space program, including the current work underway to return the Space Shuttle to flight status.

The Honorees will be given a VIP tour of the Johnson Space Center in Houston, Texas, and have been invited to attend a special reception in their honor at Brady's Landing, also in Houston. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Wellington, whose work at KSC involves analysis, documentation, and identification of critical and mission essential parts for EG&G Florida, Inc., is married to Lori Kernagis Wellington. They make their home in Cocoa, Florida.

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April 8, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center

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KSC Release No. 17-88-11

For Release:

IMMEDIATE

GERALD POWELL HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Gerald Powell is among 46 employees at the Kennedy Space Center who are being honored for their roles in exemplary work at the nation's spaceport.

Powell, who was born in Orlando, Florida, is a member of the National Property Management Association and enjoys stained glass art, photography, and softball in his free time.

The 46 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned flight space program, including the current work underway to return the Space Shuttle to flight status.

The Honorees will be given a VIP tour of the Johnson Space Center in Houston, Texas, and have been invited to attend a special reception in their honor at Brady's Landing, also in Houston. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Powell, whose duties at KSC involve maintaining accountability and control of Government Property used in the manufacturing process and assembly of Solid Rocket Boosters for the USBI Booster Production Company, is married to Joanne Nettles Powell. They have three children and make their home in Titusville, Florida.

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April 8, 1988

NASA News

National Aeronautics and
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Kennedy Space Center, Florida 32899
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Raymond R. Corey
Tel. (305) 867-4444
KSC Release No. 17-88-12

For Release:
IMMEDIATE

ROY F. AUSTIN HONORED FOR ROLE IN SPACE PROGRAM

KENNEDY SPACE CENTER, FL - Roy F. Austin son of Spencer Austin of Indianapolis, Indiana, and a graduate of Arsenal Technical High School, Indianapolis, is among 46 employees at the Kennedy Space Center who are being honored for their roles in exemplary work at the nation's spaceport.

Austin, who was born in Sayre, Oklahoma, graduated from Purdue University in West Lafayette, Indiana, majoring in Air Transportation Engineering.

The 46 KSC employees selected are part of a contingent of some 260 NASA and contractor employees from throughout the space agency being honored for their professional dedication and outstanding achievement in support of the manned flight space program, including the current work underway to return the Space Shuttle to flight status.

The Honorees will be given a VIP tour of the Johnson Space Center in Houston, Texas, and have been invited to attend a special reception in their honor at Brady's Landing, also in Houston. Honoring them will be several astronauts and senior agency officials from NASA and the industry.

Austin, who works at KSC as an engineer with the Rocketdyne Division of Rockwell International, is married to Freda M. Austin. They have four children and make their home in Satellite Beach, Florida.

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April 8, 1988

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Lisa Malone
Kennedy Space Center, Fla.
(305) 867-2468

March 28, 1988

KSC News Release No. 16-88

KSC BEGINS STACKING SOLID ROCKET BOOSTERS FOR STS-26 LAUNCH

KENNEDY SPACE CENTER, Fla. -- A milestone leading to the next Space Shuttle launch was marked today when Space Center workers began stacking operations with the redesigned solid rocket boosters that will help lift Discovery off the launch pad in August.

Stacking the 149 foot-tall boosters takes place in one of the largest buildings in the world, KSC's Vehicle Assembly Building (VAB) which is 525-feet tall. Earlier today, the left aft segment was brought inside the VAB where it will be stacked in place on the Mobile Launcher Platform (MLP).

Workers will stack the four segments of Discovery's left SRB first then begin putting its twin right SRB together. This process is scheduled to take about 40 days.

Major features of the redesigned SRB include a capture feature to make a tighter fit of the field joint, a third o-ring and a "J-seal" bonded internal insulation configuration. In addition, the field joints will be equipped with wrap-around electrical heaters to maintain a prescribed temperature for the o-rings.

Since the three field joints per SRB have a tighter tolerance, the stacking process is more exacting. Special assembly tools will ensure the segments are put together properly, and exhaustive leak checks will be conducted to verify the joints have sealed as designed. Many measurements will be taken during the stacking process so engineers can analyze the data for future stacking operations.

For the first few missions, instrumentation will be flown onboard the SRBs so engineers can evaluate the performance of the redesigned booster. Most of this instrumentation has been

- more -

installed and the rest will be attached during the stacking sequence.

Once the SRBs are stacked and aligned, a test will be conducted to ensure the integrity of the electrical and mechanical connections between the MLP and the boosters.

The next event leading to the STS-26 launch is mating Discovery's external tank to the solid rocket boosters in early May. Completion of vehicle assembly comes after the Space Shuttle Discovery is mated to the external tank currently planned for mid-May. After testing the connections between the orbiter, SRBs, external tank and MLP the STS-26 Shuttle vehicle will be ready to be rolled out to its seaside launch pad, Complex 39-B, where it will remain until launch. One of the critical tests planned at the launch pad is the Flight Readiness Firing of Discovery's main propulsion system scheduled for mid-June.

NASA is scheduled to launch the Space Shuttle Discovery in August from Kennedy Space Center on mission STS-26. During the four-day mission, the primary objective of the five-member crew will be to deploy NASA's Tracking and Data Relay Satellite from Discovery's payload bay. The mission is scheduled to end with a landing on the dry lake bed at Edwards Air Force Base, Calif.

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NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
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For Release:
March 21, 1988

George Diller
Kennedy Space Center, Fla.
Telephone: 305/867-2468

KSC Release No. 88-15

OASIS INSTRUMENTATION FOR STS-26 UNDER INSTALLATION IN DISCOVERY

Instrumentation to record the environment experienced by Discovery during the STS-26 Space Shuttle mission is undergoing installation and checkout in the orbiter's payload bay.

OASIS is designed to collect and record a variety of environmental measurements during various in flight phases of the orbiter. The primary device is a large tape recorder which is being mounted on the aft port side of the orbiter. The OASIS recorder can be commanded from the ground to store information at a low, medium, or high data rate. After Discovery's mission is over the tapes will be removed for an analysis.

The information will be used to study the effects on the orbiter of temperature, pressure, vibration, sound, acceleration, stress and strain. It will also be used to assist in the design of future payloads and upper stages.

OASIS is about desk top size, approximately four feet in length, one foot in width, three feet in depth, and weighs 230 pounds.

The OASIS data is collected from 101 sensors mounted on three primary elements. They are at a pair of points located along the sills on either side of the payload bay, on the airborne support equipment of the Inertial Upper Stage (IUS), and on the tape recorder itself. These sensors are attached to accelerometers, strain gauges, microphones, pressure gauges, and various thermal devices on the orbiter.

OASIS is expected to be fully exercised during the Flight Readiness Firing of the Space Shuttle Discovery scheduled for June and data will be collected for analysis.

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On STS-26 launch day, the system will be turned on nine minutes before Discovery's liftoff to begin recording at high speed recovering high fidelity data. Following the first burn of the orbital maneuvering system, it will then be switched to the low data rate. It will be commanded again to high speed for subsequent OMS burns.

Different data rates are to be commanded from the ground to OASIS at various times during the on-orbit operations. If tape remains, the recorder will operate during descent.

NASA is flying OASIS aboard Discovery in support of the Inertial Upper Stage (IUS) program office of the Air Force Space Division. The system was developed by Lockheed Engineering and Management Services Company under a NASA contract. Development was sponsored by the Air Force Space Division.

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* The acronym OASIS means OEX (Orbiter experiments) Autonomous Supporting Instrumentation System

NASA News

National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
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For Release:

March 15, 1988

George Diller
Kennedy Space Center
Telephone: 305/867-2468

ASTRONAUT 0-G TRAINER SIMULATES ORBITER FOR TRACKING EXERCISE

Ground support assets crucial to the in-orbit operation of the Space Shuttle Discovery were recently tested in a drill which exercised flight controllers and provided a readiness assessment for air-to-ground instrumentation.

The NASA Spaceflight Tracking and Data Network, managed by the Goddard Spaceflight Center in Greenbelt Maryland, tested three of its global tracking stations, including the MILA station located at the Kennedy Space Center.

Part of NASA's aircraft fleet but an infrequent visitor to KSC is the zero-g trainer, a modified Boeing 707 jet, used by the astronauts to simulate weightlessness for brief periods.

Called by many only by its tail number, "NASA 930" staged from KSC's Shuttle Landing Facility to embark upon a unique mission to assist in fulfilling pre-launch confidence. Its flight was intended to establish that critical mission air-to-ground support could be assured for Discovery's August launch.

During the aircraft's brief presence at KSC last month, it was not astronauts which could be seen going aboard, but nondescript metal boxes of electronic equipment. However, this equipment was well short of ordinary, and was in fact an array of sophisticated telemetry simulators intended to mimic the appearance of the Space Shuttle orbiter. Indeed, these devices had recently completed duty imitating the radio signature of the Hubble Space Telescope while installed in the payload changeout room of Pad 39-B.

more

With the help of Joe Algranti, chief of aircraft operations at the Johnson Space Center in Houston, the zero-g trainer was made available for a series of tests. Unlike the smaller Shuttle Training Aircraft used last year in previous simulations, the physical size of a 707 could provide additional space and onboard power. This was necessary to accommodate all of the equipment which can generate a replica of Discovery's air to ground radio signals for ground controllers.

After loading aboard the instrumentation at KSC, the aircraft departed for Bermuda. There, piloted by Algranti, the plane flew a series of patterns around the island which allowed the Bermuda station to perform tracking, data, and telemetry testing. This also provided a training exercise for teams at Goddard, and for the flight controllers at the Johnson Space Center in Houston who were also able to participate remotely in the simulations.

To take full advantage of the availability of the aircraft, it next was flown to Dakar for exercises, before returning to the Kennedy Space Center.

The MILA tracking station at KSC, and MILA's remote Ponce DeLeon Inlet station located on the coast 30 miles north of Cape Canaveral, then participated in practices.

During all simulations, the telemetry signals acquired from the aircraft are relayed by satellite to Goddard for distribution. For this exercise the signals are again forwarded by satellite to the Johnson Space Center. There, Houston flight controllers are able to read information, send commands back to the aircraft, and recognize the associated telemetry responses from the orbiter simulation equipment onboard the 707.

"This provided us with an ideal opportunity to checkout our new equipment which we've recently installed here at MILA and also at Ponce DeLeon Inlet," said NASA station director George Jenkins.

Since the tests have proven exceedingly beneficial, it is likely that these tracking simulations will be repeated for MILA as well as for other stations associated with the NASA Spaceflight Tracking and Data Network.

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NASA News

National Aeronautics and
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John F. Kennedy Space Center

Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Diana Boles
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Immediate

KSC RELEASE NO. 13-88

LAKELAND FIRM WINS CONTRACT TO BUILD KSC SECURITY PATROL FACILITY

KENNEDY SPACE CENTER, Fla. -- NASA's John F. Kennedy Space Center has awarded an \$849,500 contract to Specialty Maintenance & Construction, Inc., Lakeland, Fla., for construction of a new security patrol building.

The one-story, 10,000-square-foot building will be constructed in the LC-39 area at the corner of Schwartz and Contractor Roads. EG&G security management and patrol personnel are scheduled to move from their present location near the Vehicle Assembly Building to the new facility sometime in early September 1988.

EG&G Florida Inc., the prime contractor for base operations at KSC, provides institutional and technical support services such as utilities, facilities, administrative services, technical operations and health and protective services.

The firm-fixed-price contract, one set aside for award to a small business, requires Specialty Maintenance to complete all work within 150 days after notice to proceed.

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Mar. 3, 1988

NASA News

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Dick Young
Area Code 305/867-2468

For Release:
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KSC NEWS RELEASE NO. 12-88

NOTICE TO EDITORS/NEWS DIRECTORS:

KSC NEWS CENTER TO ESTABLISH TEMPORARY OFFICE AT SPACEPORT USA

KENNEDY SPACE CENTER, Fla. - The Kennedy Space Center's public information office will move into temporary quarters in Room 2001 at Spaceport USA effective Monday, March 7.

News center personnel will occupy the temporary quarters at KSC's visitors information center complex for approximately two weeks while a new roof is installed on the geodesic dome at the Complex 39 news center south of the Vehicle Assembly Building.

The customary telephone numbers will be in use during the temporary relocation. The main news center number will remain Area Code 305/867-2468 and callers will continue to reach audio-visual personnel at Area Code 305/867-7819. Only a limited number of the trunk lines usually available will be relocated and callers receiving busy signals should persist in their efforts to reach news center personnel.

The automatic recording at Area Code 305/867-2525 which is customarily used to provide information during hours of office closure will not be in operation during the relocation period.

The information office's primary photographic file is located in the Complex 39 news center and there will be no access to this file during the relocation of news operations.

Room 2001 is located immediately to the west of the tour bus boarding area at Spaceport USA. This facility is located outside of KSC security areas and access badges are not required.

Hours of operation will be from 8 a.m. until 4:30 p.m. Monday through Friday.

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March 1, 1988

NASA News

National Aeronautics and
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John F. Kennedy Space Center
Kennedy Space Center, Florida 32899
AC 305 867-2468



For Release:

Bruce Buckingham
305 | 867-2468

Feb. 29, 1988

KSC RELEASE NO. 10-88

BREVARD COMMUNITY COLLEGE ESTABLISHED AS KSC CONTRACTOR PRE-EMPLOYMENT EXAMINATION CENTER

KENNEDY SPACE CENTER, Fla. -- A Memorandum of Agreement was signed today between NASA/Kennedy Space Center and Brevard Community College, Cocoa, which establishes BCC as the examination center for NASA contractors to test entry level employees.

The agreement, effective today and signed by Center Director Forrest McCartney and BCC President Dr. Maxwell C. King, is another positive step toward returning the Space Shuttle to safe flight.

"Minimum qualifications and certifications required for technicians and inspectors to perform electrical and mechanical duties on the orbiter and associated systems is of the utmost importance in areas of safety and quality," said Dr. Marvin Williams, project manager for NASA.

"To assure potential employees meet minimum proficiency requirements," Williams said, "the pre-employment qualification examination program is being implemented. This will assure NASA that entry level contractor technicians and inspectors meet basic requirements in positions in the shuttle program."

The testing program is patterned after the Federal Aviation Administration licensing program for aircraft mechanics. Testing is currently under way. The first year's estimated cost to contractors is \$25,000.

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BCC's Cocoa campus will be responsible for serving as the testing center, proctoring the exam sessions, grading, and providing test results to the contractors. Contractors will reimburse BCC for their services on a per test basis.

This program is the forerunner to a program for possible adoption by NASA Headquarters for all other NASA centers.

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KSC RELEASE NO. 8-88

SUN COAST SERVICES, INC. WINS FOOD SERVICE CONTRACT AT KSC

KENNEDY SPACE CENTER, Fla. -- NASA's John F. Kennedy Space Center has awarded a concession agreement with an estimated annual sales value of \$2.5 million to Sun Coast Services, Inc., a small business firm in Titusville, Fla.

Under the terms of the agreement, the concessioner will provide food services for Kennedy Space Center employees, which includes the operation of cafeterias and mobile canteens. Not only will the food services be provided to employees during regular workdays, but also during space shuttle prelaunch and launch activities that occur outside of regular working hours.

Kennedy Space Center's three main cafeterias are located in the Headquarters Building and the Operations & Checkout Facility in the Industrial Area, and in the Multi-Function Facility at Launch Complex 39.

With a basic performance period of three years beginning Feb. 16, 1988 and ending Feb. 15, 1991, the concession agreement also contains three 3-year option periods.

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Feb. 16, 1988

NASA News

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For Release:
Jan. 27, 1988

KSC RELEASE NO. 5-88

FORMER SARASOTA RESIDENT PROMOTED TO KEY POSITION AT NASA

KENNEDY SPACE CENTER, Fla. -- Linda L. Rogers, a former resident of Sarasota, was recently appointed deputy chief of Procurement at NASA's John F. Kennedy Space Center.

In this capacity, she assists in managing the placement and administration of major KSC contracts for Space Shuttle processing and logistics, payload operations and base operations, as well as design and construction of new facilities, ground support equipment, studies, services and propellant commodities.

Other positions Rogers has held in the KSC Procurement Office include chief, Operations Contracts Branch; chief, Base Operations Contract and Institutional Services Branch; chief, Cargoes & Retrieval Section; contract specialist, and procurement analyst.

Prior to joining KSC in September 1966, she worked as a contract specialist at Patrick Air Force Base, Fla. She also served as procurement assistant/agent at the Naval Supply Center, Norfolk, Va. from 1964-1965.

Born in Avon Park, Fla., Rogers was graduated from Sarasota Senior High School, Sarasota, Fla. in 1959. She attended Florida State University, Tallahassee, Fla. in 1959-1962 and was graduated from the College of William and Mary, Williamsburg, Va. in 1964 with a bachelor's degree in fine arts. She undertook graduate study at the Florida Institute of Technology in 1970-71 in procurement and contract management.

Rogers is a charter member of the Space Coast Chapter of Federally Employed Women and a member of the National Contract Management Association. She received the KSC Federal Woman of the Year Award in 1975 and was named National Contract Management Association (Cape Canaveral Chapter) Member of the Year in 1976. She was a recipient of the NASA Exceptional Service Medal in 1983. She is a certified professional contracts manager.

Rogers is a resident of Cocoa Beach, Fla. Her mother, Dorothy Hand, lives in Sarasota. Her father is deceased.

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For Release:

Barbara Selby
Headquarters, Washington, D.C.
(Phone: 202/453-8536)

January 22, 1988

Diana Boles
Kennedy Space Center, Fla.
(Phone: 305/867-2468)

RELEASE: 88-10

CONTRACT AWARDED FOR SPACE SHUTTLE LANDING FACILITY MODIFICATIONS

A \$635,529 contract has been awarded by EG&G Florida, Inc., the base operations contractor for Kennedy Space Center (KSC), Fla, to Jensen Construction Co., Des Moines, Iowa, for modifications to the Space Shuttle Landing Facility (SLF).

Work to be performed by the contractor consists of grinding a 3,500-foot section at each end of the runway to smooth the surface texture, removing cross grooves and adding longitudinal "corduroy grooving." Also included in the contract are modifications to existing landing zone light fixtures and repainting of the markings on the entire runway and overruns.

The primary purpose of the modifications is to enhance landing safety by reducing Space Shuttle orbiter tire wear during landing operations. Of the 24 successful Space Shuttle missions, five ended with touchdowns on KSC's Shuttle Landing Facility.

The new configuration has been selected following extensive tire/landing gear/runway surface research conducted over the last 18 months at the Langley Research Center, Hampton, Va., by a team of analysts from Johnson Space Center, Houston; Langley; Kennedy; Rockwell International; and B.F. Goodrich engineers.

Completed in late 1975, the SLF is 15,000 feet long and 300 feet wide with a 1,000-foot paved safety overrun at each end. The SLF is 16 inches thick in the center, with the thickness diminishing to 15 inches on the sides. The runway is not perfectly flat, having a slope of 24 inches from centerline to edge.

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Four self-propelled grinding machines, specifically designed to smooth and texture concrete pavement, will be used in the operation. Each machine is equipped with diamond blades and weighs 40,000 pounds. The modified "corduroy" grooves will be smaller than the grooves to be replaced. The new grooves will run the length of these runway sections rather than across the width. Work will begin Jan. 26, 1988 and will be completed by mid-March 1988.

EG&G Florida is the prime contractor for base operations at Kennedy. EG&G provides institutional and technical support services such as utilities, facilities, administrative services, technical operations and health and protective services.

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Bruce Buckingham
305 | 867-2468

For Release:

January 6, 1988

KSC RELEASE NO. 3-88

SMALL BUSINESS CONTRACTS OPPORTUNITIES CONFERENCE

KENNEDY SPACE CENTER, Fla. -- If you're interested in doing business with the federal government or its contractors, the place to be on Jan. 19 is the Hilton Hotel at Walt Disney World Village near Orlando.

That's when the Cape Canaveral and Mid-Florida chapters of the National Contract Management Association (NCMA) are conducting a Small Business Contracts Opportunities Conference.

The all day conference and trade fair will introduce small business owners to more than 100 purchasing activities representing the Department of Defense, and civilian federal agencies, state and local governments, prime government contractors and large private industry corporations.

Attendees will be able to meet on a person-to-person basis with over 100 representatives from agencies responsible for purchasing and gather information on specific agency requirements for bidding.

Attendees will be able to take advantage of eight workshops which will cover: selling to the federal government; selling to large business; quality requirements and preparing for a pre-award survey; construction contracting with the State of Florida; how to start a small business; doing business with the General Services Administration, and pit falls in bid preparations.

Registration begins at 8 a.m. January 19 with welcoming remarks by Congressman Bill Nelson (D-Fla.) scheduled to follow at 9 a.m. Guest speakers include Monica Harrison, Associate Administrator for Procurement Assistance, U.S. Small Business Administration, Washington, D.C. and George Sammet, Jr. Vice President of Material, Martin Marietta, Orlando.

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For further information and registration forms, contact the NASA, John F. Kennedy Space Center, Mail Code: SI-PRO-4, Kennedy Space Center, Fla. 32899 or call (305)867-7353.

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For Release:

Immediate

KSC RELEASE NO. 2-88

EG&G BEGINS SIXTH YEAR AS BASE OPERATIONS CONTRACTOR

KENNEDY SPACE CENTER, Fla. -- NASA's John F. Kennedy Space Center has awarded EG&G Florida, Inc. a 1-year, \$144,886,693 extension to its existing contract for base operations services.

The extension covers the period from Jan. 1 through Dec. 31, 1988, and brings the cumulative value of the contract to \$703,964,558. This is the sixth 1-year extension to the Base Operations Contract awarded EG&G in January 1983.

EG&G Florida, Inc. is part of the Government Services Division of EG&G, Inc., based in Wellesley, Mass.

Under the cost-plus-award-fee extension, EG&G will continue to provide institutional and technical support services such as utilities, facilities, administrative services, technical operations and health and protective services at the Kennedy Space Center, NASA's principal launch site.

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Jan. 6, 1988

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Mitch Varnes
305-867-2363

For Release:
IMMEDIATE

KSC Release No. 1-88

SPACEPORT USA HAS BUSIEST YEAR IN HISTORY; PLANS FOR BIGGER 1988

KENNEDY SPACE CENTER, Fla. -- Last year's lack of Space Shuttle launches did anything but quell interest in America's space program at Spaceport USA, the Kennedy Space Center's visitors complex, where an all-time record crowd passed through the gates leading to NASA's primary launch base.

Nearly 2.5 million people visited KSC in 1987, compared to 2.1 million guests for 1986, which was the visitors center's previous record high year for attendance. Three straight record-breaking months recorded during the last quarter of 1986 continued all the way through 1987, extending Spaceport USA's string of record-setting months to 15.

The individual monthly attendance records were the primary reasons for Spaceport USA's stellar 1987, but a few other milestones also contributed to the banner year. The busiest month in the history of the KSC tourist attraction happened in July when more than 300,000 people came to Spaceport USA. This attendance figure is nine percent greater than the previous all-time individual monthly record which was set in July 1986 when over 276,000 people visited KSC.

The largest one-day crowd ever recorded at a NASA visitor center was on Dec. 29 when 23,374 guests came to Spaceport USA. Another notable first occurred on Dec. 28 when, because of overcrowding, security officials closed the space center for a one-hour period.

"The ever-increasing number of guests coming to Spaceport USA is a sure sign of the public's continuing interest and support of our nation's space efforts," said KSC Director Forrest S. McCartney. "Providing the public with comprehensive information on NASA's programs is of the utmost importance," he added.

The recent addition of a two-story art gallery can also be credited with contributing to the visitors center's record-smashing attendance numbers. NASA's first permanent art gallery

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is located inside the Galaxy Center and features more than 200 works from the NASA art program -- the world's largest space art collection. "The NASA art gallery is the culmination of years of dreams and hard work," said NASA Art Program Director Robert Schulman. "KSC is a very desirable site for the art gallery because it is the place where many of the artists' ideas began and the center where the most people can see and enjoy the art," Schulman noted.

"I think it's great," remarked Vera Simons, a vacationer from Minneapolis, Minn. "We came to Florida to visit Disney World and just came here on the spur of the moment," she continued. "I think the kids are enjoying Spaceport USA just as much as Disney."

Ernst Richter of Munich, Germany shared Simons' thoughts on Spaceport USA. "Being able to come to the Kennedy Space Center and see the launch pads and rockets is like a dream," Richter said. "We have had a very good and memorable time here."

Last year's record attendance figures and projections for a bigger 1988 have encouraged Spaceport USA officials to expand their facilities and exhibit areas.

Foremost among the list of expansions is the widening of Spaceport USA's parking lot, which now has 2,000 spaces for cars and recreational vehicles. The construction of 800 additional parking slots should allow the visitors center to meet the demands of an increased traffic flow. The modified parking area should open during the year's third quarter.

Other renovations and expansions are currently underway inside the Spaceport Central building where construction crews are installing additional food service areas, restrooms, and sitting sections. Spaceport Central's interior is being remodeled to match that of another attraction that is nearing completion. "Satellites and You," a futuristic exhibit situated in the east side of Spaceport Central, will enlighten visitors on the value satellites play in their daily lives. The attraction will lead visitors on a 35-minute journey through a simulated space station. "Satellites and You" and the Spaceport Central renovation are both scheduled to open for the public late this spring.

Spaceport USA managers are also in the process of procuring a major audio-visual production for the 500-seat Galaxy Theater. This free show should be available to visitors during the 1988 Christmas season.

Spaceport USA is Florida's fourth most popular tourist attraction and draws more than two million visitors annually. It is operated by TW Recreational Services, Inc. under a concession

agreement with NASA. No tax payer dollars are used to run Spaceport USA. A nominal fee is charged for bus tours and to view the IMAX film, "The Dream is Alive," but actual space flight hardware, audio-visual programs, NASA and contractor-sponsored exhibits and other space memorabilia are on display for visitors at no charge. Spaceport USA is open to the public every day of the year except Christmas.

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Jan. 6, 1988